



# GROW ORGANIC FOOD INDOORS

Healthy Food at Your Fingertips

[WWW.PHOENIXVOYAGE.ORG](http://WWW.PHOENIXVOYAGE.ORG)



# Table of Contents

<b>GETTING STARTED TIPS &amp; IDEAS.....</b>	<b>2</b>
INTRODUCTION TO PERMACULTURE FOR INDOORS GROWERS .....	3
FOLLOWING PERMACULTURE PRINCIPLES WHEN GROWING FOOD INDOORS .....	5
USE EDGES & VALUE THE MARGINAL.....	7
HAND-POLLINATION OF INDOORS PLANTS .....	8
USING HOUSEHOLD WASTE TO GROW SEEDS INDOORS.....	9
PLANT FEEDS YOU CAN MAKE AT HOME .....	11
COLLECTING BIOMASS FOR INDOORS GARDENS IN AN URBAN ENVIRONMENT .....	13
HOW WORMS CAN HELP WITH GROWING FOOD INDOORS.....	15
FIVE REASONS TO GROW HERBS INDOORS.....	17
<b>ARRANGING YOUR INDOOR GARDEN .....</b>	<b>19</b>
DESIGNING BEAUTIFUL EDIBLE WINDOW BOXES .....	20
FIVE VERTICAL GARDEN IDEAS FOR YOUR KITCHEN .....	22
TIPS FOR GROWING FOOD ON A BALCONY.....	24
<b>GROW WITH KIDS!.....</b>	<b>26</b>
START YOUR KIDS ON THE RIGHT PATH BY GROWING FOOD INDOORS .....	27
CREATING A PLAY AREA FOR KIDS WITH INDOORS PLANTS .....	29
COOL EDIBLE FAIRY GARDENS TO MAKE WITH YOUR KIDS.....	31
<b>BEGIN YOUR INDOOR GARDEN WITH THESE ORGANIC FOODS! .....</b>	<b>33</b>
FIVE EASY VEGETABLES FOR BEGINNERS TO GROW INDOORS.....	34
GROW AVOCADOS INDOORS .....	36
FRESH BASIL AT YOUR FINGERTIPS.....	40
GROWING INDOOR MUSHROOMS.....	44
GROWING ORGANIC TOMATOES INDOORS .....	47
HOW TO GROW TOMATOES FROM SEED INDOORS.....	51
HOW TO GROW ORGANIC STRAWBERRIES INDOORS .....	53
HOW TO GROW POTATOES INDOORS .....	56
GROWING LEMON INDOOR .....	58
GROWING MANDARIN ORANGES INDOOR .....	62

A photograph of a person's hands holding a small, round, terracotta pot containing a cactus. The person's left hand is positioned at the top of the pot, with fingers slightly curled as if adjusting the soil or the plant. The right hand is at the bottom, supporting the pot. The background is a soft, out-of-focus pattern of light and dark spots, possibly a textured surface. The entire image is overlaid with a semi-transparent purple filter. The text "Getting Started Tips & Ideas" is centered in white, bold, sans-serif font.

# Getting Started Tips & Ideas



## Introduction to Permaculture for Indoors Growers

If you are thinking about growing your own food at home, you don't even need to have a garden! In fact, you will need very little in order to make this sustainable change to your lifestyle. It could be very helpful, however, to familiarise yourself with the fundamentals of permaculture. Permaculture is a design system that gives us a guide for sustainable living. Permaculture is a portmanteau term that comes from the two words, 'permanent' and 'culture'. It has three main tenets – ethics that guide all principles and practices within the field. Beyond these three ethics are a range of further principles. These ethics and principles can help just as much for indoors gardeners as they can for those with a garden or farm.

### **The three central tenets in permaculture are:**

- Care for our planet.
- Care for human kind.
- Fair share and a return of surplus to the system.

If you can adhere to these three tenets as you grow your own food indoors, you will discover that permaculture is not only kind, ethical and harmonious, it also makes a lot of sense.

Growing your own food indoors is a good way to care for our planet. Every small bit of your own food that you can grow will help to reduce your individual carbon footprint. It will give you choices and mean that you can reject the damaging elements of the modern agricultural system and avoid buying items of food that have had to travel too far to reach your plate.

Growing your own food also helps you to meet the second ethic of permaculture. Caring for other people involves caring for your own family and friends through providing them with good quality, organically grown produce. But growing food at home can also allow you to help others in your wider community - both by setting a good example and by reaching out in other ways.

Growing your own food indoors is a great way to make sure that you are taking only your fair share and not using up more than your quotient of the planet's resources. By taking small steps (like growing food indoors) every day, you can work towards a more sustainable, green and ethical way of life. Plus, by taking on practices like composting, and making your own liquid plant feeds or containers from waste materials and kitchen scraps, you can return all surplus that would previously have been wasted and can channel it back into the cycle to continue your growing efforts.

There is a lot more to learn about permaculture, but those basic ethics should be front and centre in all your efforts to grow food indoors organically. If you keep them in mind, you cannot go too far wrong in your attempts at sustainable indoors gardening.



## Following Permaculture Principles When Growing Food Indoors

Over and above the three permaculture ethics of planet care, people care and fair share, permaculture also has a series of loose guiding design principles. Twelve such principles were put forward by David Holmgren, one of the founding fathers of permaculture. Let's take a look at following these principles when growing food indoors:

### **Observe and Interact**

Before deciding what to grow indoors and where to grow it, take time to watch and make note of sunshine, light, temperatures, breezes, patterns of behaviour and other factors that could determine the success or failure of your efforts. Observe the natural world outside and see what you can learn from it.

### **Catch and Store Energy**

By growing plants, you are catching and storing energy from the sun. You can further take advantage of the sun's energy by using it to dry herbs you have grown, or to dehydrate fruits, for example.

### **Obtain a Yield**

It may seem self-evident but the primary purpose of growing your own plants indoors will be to obtain a yield in the form of an edible harvest. Getting as much as possible from what space you have is key to many permaculture practices.

### **Apply Self-regulation and Feedback**

In other words, take note of what works well and what does not and learn from that to improve performance in your indoors garden in the future.

### **Use and Value Renewables**

Renewable energy can be provided by means of solar panels on the roof of your home, wind turbines, or other natural, sustainable power sources. You can make full use of renewable resources in a number of ways, including collecting rainwater from your roof, and making use of natural breezes to cool your home, or wood stoves/ biomass heaters (and good insulation and thermal mass) to heat it.

### **Produce no Waste**

By composting, reducing consumption, reusing and recycling wherever possible, it is possible to become almost completely waste free. Living a zero waste lifestyle is not easy, but growing your own food at home rather than buying from a shop is a good first step.

### **Design from Patterns to Details**

Look at the big picture – think about how much food you will grow, where and for whom, how much time you will have and how you like to spend it – before you look into the minute details of growing each individual plant. Learn from nature's patterns.

### **Integrate don't Segregate**

Growing food should be something your family does together. It may even bring a wider community together. What is more, permaculture shows us that it is easier to grow plants in polycultures (more than one type of plant together).

### **Use Small and Slow Solutions**

In growing food indoors, as in other areas, it is best not to take on too much, too quickly. The great thing about windowsill growing is that it is ideal for starting small, but also equally easy to build up to something more slowly over time.

### **Use and Value Diversity**

By growing a wide range of different plants, you increase your chances of success. By diversifying into growing and cooking a wider variety of herbs and fresh produce, you can make a healthier, happier life for you and your family.

### **Use Edges & Value the Marginal**

By using windowsills and corners to grow your own food indoors, you are making sure that no space in your home that can be used for growing is wasted.

### **Creatively Use and Respond to Change**

Be flexible and adapt as things change throughout the year or over time in your home. Plants grow, kids grow, things change. Use change to your advantage in your home growing efforts.



# Hand-Pollination of Indoors Plants

Not all of us are lucky enough to have access to outdoors areas where we can grow our own food. But almost everyone can still grow at least some food inside their home. Growing food indoors, however, does come with some unique challenges. One of the things we need to consider when growing food indoors is pollination.

## What is Pollination and How Does It Usually Happen?

Pollination is the process by which pollen is transferred from the male parts of flowers to the female parts of flowers in order to fertilise the plant. Without fertilisation, a plant cannot go on to produce seed. Some plants are self-fertile, so they don't need pollen from another plant, while other plants require cross-pollination from another similar plant. Understanding which plants are self-fertile and which are not, and understanding also, how different plants are pollinated, is key to success when growing food plants indoors.



We don't need to worry as much about pollination when considering vegetables such as carrots, beetroot and broccoli, for example, as the food we harvest is created before seed is produced. With other crops that we might grow, however, such as tomatoes, peppers, aubergines and squash, the fruit will not set unless pollination has taken place, so it is essential that it does.

Outdoors, pollination usually takes place through wind, animal or insect contact, and self-pollination. Bees are one example of a pollinator – one of the most important in the natural world. Of course, bees will not usually be able to get inside our homes to help us pollinate our indoors plants. So we humans will sometimes have to take things into our own hands.

## Do I Need To Hand-Pollinate My Indoor Plants?

The good news is that not all of the fruits and vegetables that require pollination to produce a crop for us will need to be pollinated by hand. Tomato plants, for example, will usually self-pollinate. That said, you may get a better crop of tomatoes if you give your plant a good shake to distribute the pollen when the flowers begin to form.

Often, all you will need to do to create good pollination is to shake plants a little, or create good air circulation to promote the processes from occurring as they should. In some cases, however, you may find it beneficial to pollinate plants using a small paint brush to transfer pollen from male to female flowers (as in the case of squash, which have different male and female flowers).

Educating yourself about the pollination needs of different indoor plants will help you make sure you get a worthwhile harvest from your indoor garden.



## Using Household Waste To Grow Seeds Indoors

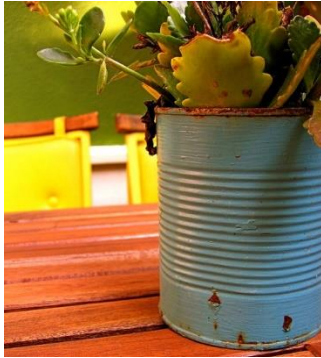
One of the fantastic things about growing your own food indoors is that, even without a garden, you can live in a more sustainable way. Another way to live more sustainably is to think about how to reduce the amount of waste that you and your household generate. Growing food indoors and reducing waste go hand in hand. You can use items that you might otherwise throw away to help you grow your food at home. To help you get started on the road to sustainability, here are five ways of using household waste to grow seeds indoors:

### **Yoghurt Pots & Plastic Trays**

By piercing yoghurt pots or other plastic tubs on the bottom, you can allow water to drain from them. When filled with a growing medium, these containers are perfect for growing your own inside your home. Plastic trays that often come with your food as packaging can also be used – these are great for catching the drips below your containers. They can also be placed one on top of another (or with existing lids) to make a home made windowsill propagator.

### Plastic Bottles

Plastic bottles can also be used to make little propagators to start seeds on your windowsills. Or, they can simply be cut in half and make perfect containers for growing plants, with the top part inserted into the lower half, with the neck downwards to allow for drainage.



### Tin Cans

Tin cans can also be stripped of their labels and look great as rustic plant holders. As long as the tins were used for holding food, they will be perfect for growing more of it. Just be careful as you fill the cans not to cut yourself on any sharp edges. You could also paint them with non-toxic paint to stop them from rusting and to create a finish you like.

### Toilet Roll Tubes, Cardboard

Toilet roll tubes and other small, untreated, plain cardboard boxes are perfect for starting off seeds. They are great for seedlings that will be transplanted to larger containers later but which do not like for their roots to be disturbed. Since the cardboard will decompose in soil over time, they can be planted with the seedlings into larger containers (or outside), allowing you to leave the roots of the seedlings undisturbed.

### Kitchen Scraps

Of course, cardboard and untreated paper can also be composted, as can scraps from your kitchen. Fruit and vegetable peelings, and other kitchen scraps can be turned into compost – compost that could be used as a growing medium for your indoors plants. You don't need a lot of space for a compost bin, and you can even compost indoors if you don't have any outside space. Making your own compost is the very best way to put waste to good use.



## Plant Feeds You Can Make At Home

Once you have started growing your own food at home, there are certain things you can do to increase the size and quality of the harvest that you are able to achieve. When growing food in containers, it is even more important to think about the nutrition they receive. One great way to make sure your plants get the nutrition they need is to make your own liquid feeds for your plants. Here are five easy to concoct plant feeds you can make at home:

### **A Wormery Plant Feed**

If you have a wormery where worms help to create compost in which you can grow your plants, you will usually have to drain off excess liquid from the bottom of the container. This water is an ideal plant feed for home-grown food.

### **Compost Tea**

Even if you do not have a wormery, you may still create compost in your home using another method. If you do, you should know that compost can also be used to make 'compost tea'. Simply by dissolving some compost in water, you can create a fertiliser that can be delivered to your containers in liquid form throughout the growing season.

## Green Tea

For leafy vegetables and other plants that need a lot of nitrogen, you could use a weak solution of green tea to give them a boost. Use one teabag to around two gallons of water and use around once a month on nitrogen hungry plants.

## Gelatin

Another item that you may have in your home which is a good source of nitrogen for your plants is gelatin. Dissolve one package of gelatin in one cup of hot water, then add three cups of cold water to the solution. This can be used on leafy plants once every four weeks or so for a bit of a boost.

## Aquarium Water

If you keep fish, you may not realise it but you have another valuable resource at your fingertips. Aquarium water contains all the nutrients that plants need to grow in the form of the fish waste. While changing the tank, use this nutrient rich water on your crops to increase the size and quality of your harvest.



**All of the above offer 'green' solutions for those who want to grow food organically indoors and are great ways to make the most of the space and resources you have inside your home.**



## Collecting Biomass For Indoors Gardens In an Urban Environment

Not having an outside garden can make it a little more difficult to find the resources you need to grow food organically. But even if you do not have your own outside space, it is still possible to get your hands on the materials you will need to garden sustainably. You will find natural resources all around you – even when you live in the middle of a city. Here are a few tips to help you collect biomass for indoors gardens in an urban environment:

### Collecting Grass Clippings For Composting or Mulch

Grass is often a common feature in cities – on verges, in parks or on public land. Often, the grass is cut on a regular basis and the grass clippings are simply thrown away. A lot of the time, it is possible for home growers to get their hands on these clippings, which are a valuable resource in organic gardening. Grass is high in nitrogen and is excellent for speeding up the process of composting kitchen waste when added in small quantities. It can also be a good mulch to place in containers or



growing areas around leafy plants. You may be able to ask neighbours, or municipal workers, whether you can have some grass clippings – just make sure that the grass in question has not been sprayed with any harmful herbicides or pesticides and is free of contaminants.

### Collecting Leaves For Composting or Mulch



Leaves are another resource that can be found in cities as well as in more rural areas. When leaves fall in autumn, these are often just left lying around on roads and pavements. Sometimes, the authorities will sweep them up and throw them away. With the permission of the authorities or landowners, it is often possible to source as many leaves as you need for use in your home growing efforts. Leaves are also excellent for adding to your home compost, or for creating a mulch around growing plants.



## How Worms Can Help With Growing Food Indoors

Growing food indoors can be a great step towards living a more eco-friendly and sustainable way of life. But there is a lot more you can do to make your food growing efforts even greener. One of these things is to reduce the amount you need to buy by recycling kitchen scraps and other household waste such as paper and cardboard to make your own compost, which can be used as a growing medium for your edible plants. There are several ways to compost indoors, and in small spaces. One of the best of these is called vermiculture. Vermiculture is the process of using worms to help you to create a good, fertile compost for your plants. Read on to discover exactly how worms can help with growing food indoors:

You are probably already aware that the worms in the soil outside help to keep the subsoil ecosystem functioning as it should. Earthworms are vital to growing food outside. But worms can help inside too. While it would not be much good having worms in the small containers on your windowsills and shelves, they can help when placed in a wormery, where they will eat up food and excrete castings which help to make an especially rich and fertile compost for growing plants.



The worms you need for a wormery are called 'tiger worms' and you can order them online in many parts of the world. These worms are especially good at the job of breaking down compost. They need air, food, water, and the right temperature – between around ten and twenty-five degrees Celsius is ideal. When you get all of those things right, you can pretty much leave them to get on with their job of making your compost, simply adding kitchen scraps and cardboard and paper in small amounts as you go along.

There are a number of different ways to make your own wormery, or you can just buy one online. Either way, you'll need to think a little about how big your wormery will need to be before you get one. How big your wormery should be will depend on how much food waste you generate – of course this depends on how many people live in your home.

One Example of a DIY Wormery, which can be kept inside or out and takes up little room

Once you have decided how large your wormery should be and either bought or constructed it, it is time to prepare for your worms (and order them for delivery). The worms will need to be given some food, and a layer of 'bedding' (shredded paper, cardboard). Adding a little soil just at first can also help to make sure the worms have everything they need.

There is a lot to learn about keeping your worms happy over time, but there is nothing difficult about the process – even kids will love giving it a go. You might feel a little funny about keeping worms and compost in the house, but the worms will stay in their wormery as long as the conditions are right, and, surprisingly, there will be little smell to a well-kept wormery either.





## Five Reasons To Grow Herbs Indoors

Growing at least some of your own food is one of the best things anyone can do! Herbs are often amongst the easiest plants to grow indoors and they can be grown in even the very tiniest of spaces. Here are just five reasons to grow herbs indoors – something that everyone can do, and everyone should be doing:

### **For Our Planet**

It could perhaps go without saying, but one of the main reasons to make efforts to grow your own herbs and other food at home is for our planet. It may seem obvious, but everyone can reduce their carbon footprints by reducing the amount of store-bought food they have to buy. Growing food to feed the planet's growing population without harming our planet is perfectly possible – but only if we make changes to the polluting and wasteful way things are done at present. That includes each and every one of us taking back control and making good decisions about what we eat. Growing herbs at home is the perfect first step towards your greener way of life.

### **For Year -Round Flavour**

Meals made with fresh, home grown produce can be more delicious than you might ever have imagined. Fresh herbs can broaden your repertoire of home-grown, home-cooked meal options considerably and add a range of flavours to home-grown cuisine throughout the year. Herbs can be used fresh, or dried. Sometimes drying herbs can subtly alter the flavour and provide something different for other recipes.

### **For Nutritional Health**

Organic herbs are often extremely expensive when bought in a shop. Yet choosing organic herbs and vegetables is better for our health as well as for our planet and the environment. Growing your own nutritionally optimised, healthy, organic herbs can save you a lot of money, while giving you access to this valuable nutritional resource. Put simply, organic home-grown herbs can help you live a healthier lifestyle.

### **For Herbal Remedies**

Over and above their general health benefits when used in recipes in your kitchen, various herbs can also be used to concoct a wide range of herbal remedies. Learning about herbal remedies can help you manage the symptoms of common ailments and treat minor wounds or maladies at home when medical help is not required.

### **For Other Uses**

Thinking a little outside the box, you will realise that herbs are not just for eating. Some herbs can also be used in home-made soaps, lotions or cleaners. There are some excellent recipes for home-made cleaners for you, for dishes, clothes or for general use around the home. Growing herbs at home can offer far more than you might imagine.

A close-up photograph of a person's hands holding a small, round, terracotta-colored pot containing a small cactus. The hands are positioned as if carefully examining or adjusting the plant. The background is a soft, out-of-focus pattern of light and dark spots, possibly a patterned surface. The entire image is overlaid with a semi-transparent purple filter. The text "Arranging Your Indoor Garden" is centered over the image in a white, sans-serif font.

# Arranging Your Indoor Garden



## Designing Beautiful Edible Window Boxes

There is no reason why a windowsill garden cannot be beautiful as well as edible! While your main purpose is to grow food at home for yourself and your family, your indoors gardening efforts can also be aesthetically pleasing. If friends and neighbours are dubious about your efforts to grow your own, designing beautiful, edible window boxes could be the perfect way to win them all over. To help you in your efforts, here are some tips on beautiful edibles that you can grow beneath all your windows at home:

### Mixed Salads

The large array of lettuces, Asian greens and other leafy greens for salads means that they can bring a lot of visual interest to your window boxes. These easy to grow plants can be ready to harvest for your salads in as few as four to six weeks and since they are cut-and-come-again, you can enjoy the display over a long period, without harvesting leading to bare patches in your display. Once lettuce and other salad crops bolt, they can still be attractive – often with a profusion of pretty little yellow flowers. You can leave some of these for visual interest, and also as a boon for passing bees. You might even be able to start collecting some of your own seeds for the following year's planting.

### Edible Flowers

Mixed salads can be inter-planted in your window boxes with edible flowers such as nasturtiums, pansies, violas and many more. These bright and attractive flowers will brighten up your windowsill and your summer salads. Nasturtiums also provide edible seed pods which can be used in the same way as capers, and will trail down the side of a building over the edges of your display.



### Other Attractive Edibles

There are plenty of other attractive edibles that are ideally suited to growing in a window box or a similar container. Dwarf peas can be allowed to trail over the edges, first providing interest in the form of the pretty white flowers, before creating their pods. Trailing tomatoes can also look extremely attractive. Strawberries too can be a great addition, with their pretty flowers preceding their vibrant fruits. Amongst leafy vegetables, chard comes in all different shades, and can be very pretty, as well as being a versatile and useful ingredient in a wide range of recipes.

Once you begin growing your own food at home, you will realise that there is a wealth of options for those who want to create a beautiful, edible garden. Your window boxes can be both practical



## Five Vertical Garden Ideas for Your Kitchen

One of the challenges of growing food indoors is finding enough space for all the food you wish to grow. As long as you get enough light, however, you can grow far more indoors than you might imagine. In order to get easy access to all your herbs, salads, fruit and vegetables, the best place to start your indoors garden is in your kitchen. Even a small kitchen can provide space for planting – but sometimes you have to think upwards.

Even when there is not much space on windowsills, work surfaces or on the floor, you may still have room for a vertical garden on a bright wall. Vertical gardens are a fantastic solution for those with limited space for indoors growing. And it is easier than you might imagine to create your own. To inspire you to start growing your own food indoors, here are five cheap and easy vertical garden ideas for your kitchen:

### Simple Shelving

One of the simplest ways to begin growing food up your walls is simply to install some shelves. You can make shelves for plants quickly and easily from wooden pallets or other scrap wood. These shelves can then be fully stocked with containers in which herbs, leafy vegetables and soft fruits such as strawberries can be grown. Shelves in front of a window could be temporary, but would allow for more plants to be grown where there is enough light.

### Cup Hooks With Hanging Planters

Hanging planters (or simply plant pots, yoghurt pots or other containers held and hung with garden wire) are fantastic for making the most of all the vertical space in your kitchen to grow food. You can hang a whole bunch on one wall by affixing them to a series of cup hooks.



### Fabric Pocket Vertical Garden

A fabric pocket vertical garden is another cheap and easy option for anyone with basic sewing skills. Sturdy scrap fabric from old clothes or household bedding can be re-purposed, lined with a waterproof backing (such as an old tarp or tent material, for example) and fashioned into a wall hanging with pockets in which plants can be grown.

### Guttering Hydroponic System

If you fancy trying something a little different with your inside growing, hydroponics might be a good way to go. With lengths of plastic rain guttering, some supports, and a small pump, you can create a vertical garden that grows salads hydroponically. Even without the hydroponic components, however, rain guttering can still be used to create a fantastic vertical garden to hang on the wall of your kitchen.

### Plastic Bottle Towers/ Strings

Finally, for something really affordable – simply stack cut down plastic bottles or suspend the top halves of plastic bottle on string or wire to create tall towers or hanging strings of planters. You can





## Tips For Growing Food on a Balcony

If you are lucky enough to have a balcony then you should make sure you are making the most of that space. Even on a small balcony, you will be able to grow plenty of food for yourself and your household. Here are a few tips to help you make the most of this part of your home:

### Use Every Inch Of Space

Container gardening and vertical gardening techniques mean that you will be able to make the most of every inch of space on your balcony for food growing. Think about the space not only in terms of the horizontal floor area but also in terms of the vertical space. Food can be grown up the back wall of a balcony, or up, on or over the railings which surround it. You could increase the growing space available to hooking containers onto the outside of the rails, and can also stack containers to make vertical towers for planting. You may also be able to create hanging gardens – if there is a ceiling to your balcony, you could perhaps use it to suspend a series of hanging baskets and other containers to make your own hanging gardens.

## Grow On Your Balcony Year Round

Open balconies can often get too hot in certain climates during the summer months. If you live in a warm climate, consider creating a shaded area in which to grow some edible plants. Covering some of a balcony with shade netting can make it easier to grow food in these outdoors areas in areas that are hot in the summer.

In other parts of the world, a balcony can become very cold in the winter. If the winter weather is cold where you live, you could still consider growing food on your balcony – even when there is a definite chill in the air. By using cloches, mini-polytunnels and other options to cover your growing areas and containers, you could still continue to grow a range of plants throughout the whole year.

## Make A Seating Area Without Giving Up Planting Space

If you enjoy spending time in your balcony garden, you will be far more likely to give it the time and attention that it needs. Create a seating area on your balcony – but think carefully about the layout and design of that seating area, so you do not lose too much of your planting space. Hammocks and hanging chairs can be an ideal solution, as plants can still be grown beneath them. Another idea is to choose folding furniture, so it can be stored out of the way when not in use.



## Harvest Rainwater

Another important element to consider when planning your balcony garden is how you will water your growing plants. If your balcony is covered, you can often still harvest rainwater from it by placing containers below down spouts on guttering, or simply by suspending a bucket outside the rails which can collect water falling from the balcony above. On open balconies, simply placing buckets or other containers out in the rain will help you to collect this precious resource to use on your garden.



A close-up photograph of a person's hands holding a small, round, terracotta pot containing a cactus. The person's fingers are covered in dark soil, suggesting they have just finished planting or tending to the cactus. The background is blurred, showing other plants and what appears to be a garden bed. The entire image is overlaid with a semi-transparent purple filter. The text "Grow with Kids!" is centered in white, bold, sans-serif font.

**Grow with Kids!**



## Start Your Kids On The Right Path By Growing Food Indoors

We all know how difficult it can be to keep kids on the right path. With temptations coming at them (and us) from every angle, it can be easy to raise kids that are totally disconnected from the natural world, kids who don't rejoice in healthy food, who are glued to their screens and who know little about the wider world or the global effects of the decisions they make. Growing food is together with your children is one of the best ways to raise ethical citizens who will be good custodians for our planet in the years to come. Even without a garden or outside space, you can start your kids on the right path by growing food indoors. Here are some tips to help you re-engage your little renegades:

### **Lead By Example**

Children learn by watching. They will take their cues from you, and from the other adults in their lives. Lead by example by starting to grow food yourself, by reducing, reusing and recycling, by engaging with nature, even in the middle of a city. Soon, where you lead, they will be sure to follow.

### Engage With Nature

Engaging with nature is a crucial part of understanding how to grow food at home and is key to success in your endeavours. Take time to spend time outside with your kids, observing plants and how they grow, getting to know the ecosystems around you. The lessons you learn outdoors can be put to good effect when you begin growing food at home.

### Start With Their Favourites

When trying to encourage kids to grow food with you in your home, it is important to allow them to make some of the important decisions. Rather than buying in all the seeds yourself, try to choose seeds together. Begin by growing things that your child enjoys eating – strawberries are often a firm favourite, and sweet fresh peas also often appeal.

### Give Them Some Control

Let your child take charge of some of their own planting – that way, they will feel a sense of accomplishment when they taste their first delicious home-grown produce. As well as allowing them some freedom about what they plant, make sure they also have some control for caring for their plants, and for harvesting when it is time. Kids will love the responsibility and the freedom and will be more likely to create healthy habits that last when they have some control over what happens. Help them to succeed, but loosen the reins a little as you do so.

### Make It Easy & Fun

Kids will be more likely to stick with growing their own if they don't find it too difficult. Start with things that are easy to grow, that give relatively quick rewards for minimal efforts. Salad leaves can be good for this, radishes, peas... there are a lot of options. But remember to pitch your activities correctly, so children don't fail and give up before they have hardly started. Things won't always go right – but making it easy means they won't mind so much when things don't go according to plan.

It is also important to remember that growing your own food is meant to be fun!



## Creating A Play Area for Kids With Indoors Plants

Plants create a pleasant indoor environment. Having plants around your home can not only allow you to eat healthy produce affordably, it has also been proven to make people feel happier and calmer. We are meant to live in green, leafy environments and growing plants indoors can help us keep our connection to the natural world. Kids can enjoy a home filled with indoors plants as much as adults. Use your imagination and you can create a play area for kids using indoors plants. This play area can be used to teach them about growing food but can also serve as a safe and relaxed space for all sorts of play.

### A Runner Bean Wigwam

Runner beans climb quickly up canes used as supports and can be grown in large pots in the same way as they are grown in the ground, as long as they are filled with a good, fertile planting medium. To create a den for kids in a sunny room which gets at least 4-5 hours of sunshine per day, simply place large pots in a circle. Place a garden cane or long, straight branch in each one and lean all your posts into the centre to make a wigwam, securing them with twine. In each container, sow a few runner beans – soon these will grow up the canes and create a private den for kids. The scarlet flowers will also be attractive within your home and come harvest, will have plenty of beans for eating green, or drying when mature for use later in the year.

### A Pea Screened Play Pen Den

Another simple idea for creating a play area using edible plants is to create a den for kids by growing peas up a simple play pen or other basic structure. Peas are easy to grow and kids can enjoy picking and eating the pods and peas straight from the plant as they play. Simply place containers around the edge of your play pen and plant peas in each one. The peas will scramble up the structure (play pen or similar) that you have provided for them and give kids a place to hide for 'secret' picnics and the like.

### A Seed Growing Kitchen or 'Science Lab'

Imaginative play is key for children's development and providing an area where they can experiment and cook up their own plant based recipes will help them to develop their imaginations, as well as skills they will need later in life. Help them to plant up some edible crops that they can use to make their own salads, and provide seeds and pots to help them experiment with indoors growing on their own terms.





## Cool Edible Fairy Gardens to Make with Your Kids

Growing your own food indoors is one of the most rewarding and valuable things that you can do with your children. But how do you make indoors gardening fun for your little helpers? One idea is to bring the magical into your food growing efforts, creating a home for fairies! Here are three ideas for cool edible fairy gardens to make with your kids:

### **A Chard & Pea Shoot Fairy Forest**

Chard and peas both have reasonably large seeds that little kids can handle quite easily, and both are easy to grow for beginners to home growing. Colourful chard and quick-growing peas are also ideal for creating a little fairy forest for your home. If you wanted, you and your kids could create a little path leading through this fairy forest using twigs or stones you forage from your neighbourhood. Your kids can also help to 'manage' this fairy forest, by chopping down some 'trees' when they are ready to eat.



### A Micro-Green Fairy Garden

You can use a wide range of micro-greens such as cress, lettuce, mustard, rocket, purslane and more to create a pretty fairy garden. Why not use some sticks, stones and other natural items to make a little house for the fairy to live in, then help your kids plant up the fairy's garden? The cute little sprouts from the fairy's garden could make it easier to get your kids to eat their greens. You could decorate the garden with shells, driftwood, sand, cones, evergreen leaves, or other items you can find on your days out.



### A Mint and Strawberry Fairy Fun-Land

Place containers of varying sizes one on top of the other to create a tower of pots, with planting areas around the rims. Have your kid help to make a series of ladders/ steps or slides with household trash – these are now the fairies get around! Now, plant up your stack of pots with strawberry plants and perhaps some mint which will be perfect for a summer treat – for the fairies and for you and your family.

There are plenty of ways to make growing food magical for your kids – making a fairy garden is just one of them. Use your imagination and retain a sense of wonder in the natural world and you will find that your kids will follow your example.

A close-up photograph of a person's hands holding a small, light-colored ceramic pot filled with dark soil. The hands are positioned as if they are about to plant something or are just finishing. The background is blurred, showing other similar pots. The entire image is overlaid with a semi-transparent purple gradient. Centered over the image is white text.

**Begin your Indoor Garden  
with These Organic Foods!**



## Five Easy Vegetables For Beginners To Grow Indoors

If you are a complete beginner when it comes to gardening, you may be wondering where to begin. The good news is that anyone can grow at least some of their own food at home, even without a garden or outside space. All you need is some seeds, some containers (you can use household waste for the purpose), water (ideally rainwater) and a sunny windowsill.

Which vegetables you grow is up to you – choose things you like eating as this will give you more incentive to keep going if everything does not quite go according to plan. To give you the best possible chance of success, it is best to stick to vegetables that don't require any specialist gardening knowledge, and which are well-suited to growing indoors. To help you select your seeds, here are five easy vegetables for beginners to grow indoors. Each of the following options are great choices for novice indoors gardeners:

### **Cut-And-Come-Again Lettuce Mixes**

Seed selections with a mix of different loose leaf lettuce varieties are ideal for beginners. These mixes provide a range of leafy vegetables for salads and different varieties can be grown throughout the whole year. One of the fantastic things about these lettuce mixes is that they can be cut and will grow back to be harvested again, offering great value for money. Lettuce is also a very quick growing crop, so you could see rewards in the form of a harvest in as few as four to six weeks.

## Asian Greens

Asian greens such as mizuna, mibuna and pak choi also all offer easy leafy vegetables for salads and stir fries. There are a number of different types and varieties to choose from, many of which can be very forgiving of any small mistakes you may make early on in your home growing efforts.

## Radishes

Radishes are another easy to grow and quick growing crop that can give great value for money in small spaces on a windowsill or in container growing. If you do grow radishes, don't forget, you can eat the leaves as well as the fiery roots. Plus, if your plants bolt (go prematurely to flower and to seed), you can also gain another abundant harvest from the plants – the seed pods are also edible (and delicious) and just one radish seed can provide a huge number of pods.

## Garden Peas

If you have not already tasted garden peas straight from the pod, then you will be amazed by how sweet and delicious they are! Give peas something to climb up and you can be rewarded with a fantastic yield for very little effort. If space is very limited, you can also plant peas close together in a window box or another container and harvest while young as pea shoots – these are another fantastic addition to home grown salads and other recipes.

## Chard

Finally, chard is another fun, attractive and delicious option for beginners to grow indoors. It does not take much looking after, and comes in a wide range of enticing rainbow shades. Chard, like lettuce, can also be cut and will come back to be harvested again.





## Grow Avocados Indoors

### Get familiar with Avocado

Avocado is a tree crop whose origin has been traced to South Central Mexico. It is a flowering plant which is classified to belong to the family Lauraceae and contain as much 160 grams calories, total carbohydrate of 9 grams, a protein estimate of 4 grams and fat composition of 15 grams per every 100 gram of the crop. This shows how rich the plant is nutritionally. It is arguably the fruit with the greatest protein content with its four grams of protein, and although there has been a wide argument about whether they are fruits or vegetables, they have been scientifically proven to be fruits. There are also other fun facts about avocados which include that they are baby friendly, fiber rich, they lower bad cholesterol, upgrade dip and spreads, usually referred to as an anti-ageing powerhouse and possess a natural packaging. Avocado trees do not self-pollinate and hence they need another avocado tree around to help their pollination process.

Avocadoes are really great additions to your gardens, and cultivating them is as simple as cultivating other houseplants. In fact it is a common thing among kids to suspend avocadoes in glasses of water to see what happens next to them. The pear shaped fruits are very delicious and they are rich as they make excellent condiments or perhaps eaten alone. It is a tree crop of the warm season and thus are easily affected by frost and cold weather.

This explains why northern gardeners need to learn the planting of avocado as houseplant such that they could enjoy their fruits at home.

### Concerns with growing of Avocado indoor

There has been questions about the indoor growth of avocado courtesy of its height as a tree crop. The plant can grow as high as 80 feet in height. In the United States, most tree crops do poorly when the freezing weather and cold season emerge. Gardeners have therefore being worried about growth of the crop and have always asked been careful of growing the crop as an outdoor crop. They have therefore always asked if it can be grown in homes and the answer is simply yes. This is because there are several dwarf varieties of the crop which can produce as much as the tall ones at home in both the cold and temperate seasons.

## ALL ABOUT GROWING AVOCADOES

### Growing Avocado inside a container

Growing avocado indoors is quite simple and easy. Starting with cultivation in containers, sprouted pit will be moved to an unglazed terracotta pot of at least 10 inches both across and twice as deep as the roots. A potting mix with compost blended sand is recommended for a loose fast draining composition.

Like in some other plants, growing of avocado indoors, especially in containers require bright light. They also need cool nights to allow blooming and fruiting. Without the adequate light needed for survival of the crop, it should not be a surprise if the plant get straggly. Excess growths are also supposed to pinch off so as to promote a bushier as well as stronger plant.



When the planting is done in containers, you are not supposed to expect fruits as this can take a lot of years (around ten years) to get to the fruiting stage. If you luckily get fruits from them at earlier stages, the flavor will never be good as those commercially produced from rootstocks.

### Caring for indoor avocado

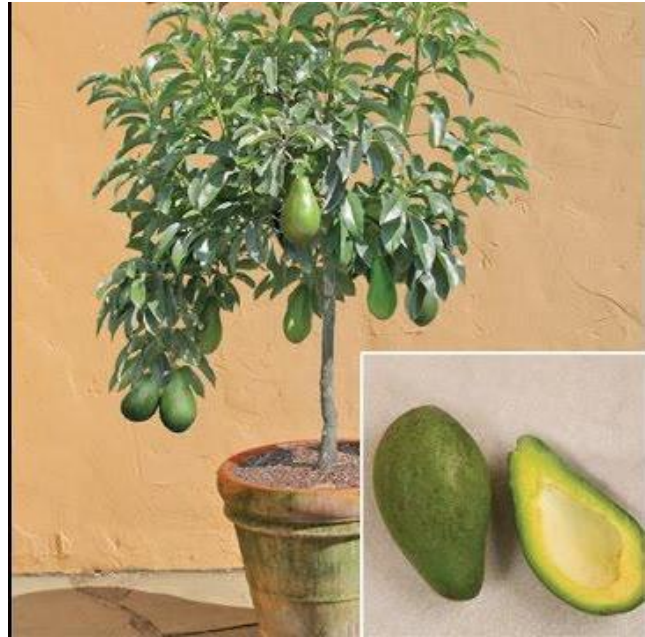
A rich and fast-draining mix is ideal for avocado growth. It is a plant that thrive in full sun like banana. When you are starting from a seed, you could keep them on a bright windowsill until the first sets of leaves and roots form from it.

For a better chance at fruiting, you have to purchase a dwarf tree that has been grafted directly onto rootstock. The choice of rootstock as in any propagation is to increase the best trait of the plant such that it would be stronger and more resistant to a variety of diseases and environmental influences. Care of indoor avocado plant especially include support and feeding. Stakes are used to train the stem to become sturdy and straight as it grows. Ensure to transplant the tree the moment you see it is outgrowing the pot. Also endeavor to prune off any suckers that arise from the rootstock.

Fertilization is done with water soluble food monthly. While this is done, try to turn the tree frequently such that growth is evenly promoted. Fertilization could also be done with fish emulsion in every month of the first year.

Avocado doesn't play with water. Therefore whenever you feel the dry to the touch of the soil, give the plant moderate water. Yellowing of leaves in avocado are usually signs of too much water resulting from flushing off of fertilizer salt from the soil.

Avocado doesn't play with water. Therefore whenever you feel the dry to the touch of the soil, give the plant moderate water. Yellowing of leaves in avocado are usually signs of too much water resulting from flushing off of fertilizer salt from the soil.



### Propagation of Avocado



The plant can be propagated in a number of ways. These range from grafting to air layering. Professionals however favors grafting as they have been able to make desirable and disease resistant stems through the process. Propagation is usually done in the home with seeds. To sprout the seed, the usual way is to insert three toothpicks into the seed and suspend it with its end down over a glass of water. The water should be made to cover about an inch of the seed.

After this, the container should be kept in a warm place but not under direct

sunlight. The seed should be expected to sprout between two to six weeks. The young plant should be left to grow to up to six inches such that the plant will have a stronger root. The plant could be transferred to a pot which soil has been readied after the new leaves have emerged on plant.

### Repotting

From this point, avocado could be grown in another pot when it begins to grow again. You would ensure a good trimming routine on the plant for the first few years, and this is done to encourage a bushy avocado. First intense trimming should begin when the plant reaches the height of 12 inches. It should be trimmed back to 6 inches at this time and allowed to grow new leaves and from new stems. As the plant gets taller, continue to pinch off the new growth during the summer to favor new outgrowth. This is because avocado fruits from new generation.

### Varieties of avocado

You have got as much as 1000 varieties of the crop to pick from. However, the one that is most likely to find its way into your home is the Haas avocado, and it is tremendously grown in California and perhaps throughout the Latin America. This variety is a small and pebbly avocados having high fat content as well as delicious flesh. The lighter green Florida variety is also a good one as they have less fat and are usually publicized as health-conscious avocado.

### Disease Care

Avocado are usually affected by canker, fruit rot, root rot, sunblotch as well as wilt and blight. All of these however have specialized ways in which they are treated they are also affected by insects such as borer, caterpillars, Lace bugs, mites and Thrips. All of these have different part of the plant which they feed on to render the plant less productive. My advice on prevention and prevention of dieses and insects is to consult professionals.

### Scientific development in avocado production

It is reported that much more researches have been done and continued in developing cold tolerant avocado. This will also assist in getting more avocado to the people as well as allow gardeners to plant any time of the year.

Avocado is simply one of those fruits you can plants and have in your own reach all year round when you plant them indoor. You have the necessary steps to follow. Yours is to try.





## Fresh Basil At Your Fingertips

### Origin, composition and acceptance

Basil is an herbaceous plant. It is commonly grown outdoor, but with easy care it can also be grown indoors. The plant is a rich source of vitamins including A, B6, C and K, and it also have mineral components such as iron, manganese and magnesium.

All of this explains how nutritious basil could be when consumed by man. It is widely used in both fresh and dried form of it. It is used majorly in cuisines, and it is especially used for foods made of tomato, soups, salad, pesto and chicken meats. Although suggested to have originated from India, it is widely grown all over the world today, and that speaks for its acceptance as spice and medicine all over. For successful growth, the plant prefers light soil and high temperature as it does not tolerate drought. It's around 160 different varieties are differs in leaf color, flowers and chemical composition, but the chemical composition determines the taste of the plant. Aside its use as spice, basils are also cultivated for its oil which re essential medicine and of great use in the chemical industry. It is widely cultivated also for ornamental use.

### Physical and compositional fact of the plant



Depending on their varieties, basil can grow as tall as between 12 and 51 inches. They have green silky leaves which mostly are oval in shape. However, some varieties of the plant have purple leaves. The plant develop spiky miniature flowers which usually appear on top of plant. Its flowers come in colors ranging from pinkish to whitish or mauve in color. It is insect pollinated and their flowers turns into dry leaf fruit usually called achene. Propagation is usually via seeds and plant cutting. It has many edible parts including flowers and leaves, but the leaves are more edible than the flowers. Also the leaves have be tested to be rich in non-essential oils. Usually, when the plant starts flowering, the plant's stem becomes rough and essential oil production ceases. To avert this, gardeners usually remove flower buds to prolong lifespans as well as leaves freshness.

Varieties of basil are so natural distinct that they have different aroma. The sweet ones have clove-like aroma, and the lemon and cinnamon basil have lemon and cinnamon-like aroma respectively. Although the plant is used in most salty dishes, its fresh leaves can be used as ingredients used in preparing chocolate and ice cream. The plant is also used in folk medicine especially for treatment of constipation, cramps, depression, anxiety and flatulence. The plant is also largely antimicrobial, antiviral and anti-oxidant, and this suggest it could be used for cancer treatment. The plant contains chemicals which repel insects and it has been found to be toxic to mosquitoes. It is an annual plant and this means that it completes its life cycle within a year.

## HOW TO GROW BASIL INDOORS

### Soil, water and fertilizer requirements



Growing basil indoors is easy with the use of container. The container is usually filled with well-drained and nutrient-rich soil. The soil is supposed to be moistured and not saturated. The plant is not tolerant of water stress and therefore adequate water should be made available to it always. This doesn't means that planting medium should soggy, in which case the root will be prone to rots. Growth of the plant requires fertilizers like other houseplants, and general houseplant fertilizers can be used maybe at half the recommended strength.

The basil, which are used as flavor, are fertilized organically because that help to maintain the pH level of the crop when grown indoors, as the sufficient pH level for growth is between 6.0 and 7.5. The growing container should be filled with  $\frac{3}{4}$  soil.

### Potting

Containers (pot) should be sterilized such that diseases are not easily transferred to basil seeds. This could be done by soaking the container in a solution made of water and a mild cleanser before it is rinsed and scrubbed. The choice of pot is important in indoor growing of basil because that is a direct function of soil drainage. A pot that offer sufficient drainage should be chosen. Majorly, the pot should be made of clay, plastic, concrete or stone, where draining holes are created in the bottom regardless of which material is in use.

### Transplanting

Transplanting occur few weeks after the first seeds have been s own. Seeds are sown in an inches or two apart, and scattered along the length of the container. Thinning begins immediately seeds begin to sprout to about five centimeters in height. Basil seedlings are very fragile and therefore should be handled with proper care during transplanting process. Because of this, a lot of gardener prefers to plant seeds rather than seedlings.



### Lighting requirements

Lighting is important for growing basil. The planting container should be placed in a sunny window facing south and it must be exposed to at least six hours of sunlight. This doesn't mean that the plant should be placed entirely and directly under the sun. Where the required windows are not available and lighting could be a difficult one, you could grow the plant under fluorescent lights. However, when fluorescents are used as light source, the plant would need about ten hours of light for healthy growth instead of six. You could also alternate between sun and artificial lighting.

While the growth of the plant is fun, it usually require a frequent repotting. If these approaches could be followed properly, you would have delicious herb all year round.



## Growing Indoor Mushrooms

Many gardeners have asked if it is possible to grow mushroom at home and the smart answer to that question is yes. In fact, the curious but tasty fungus is typically grown indoors rather than in fields or gardens. Production is taken with care as there are designed kits for mushroom cultivation. However, it is also a possible task to set up your own mushroom growing area in the comfort of your home. Before you learn exactly how, here are a few facts to chew on about mushrooms.

### Fun facts about mushrooms

Mushrooms are not the usually green plants, rather they are fungi. They are different from the conventional plants as they are from plants. As a matter of fact, fungi and animals are now classified to belong to the same super-kingdom called Opisthokonta. Fungi usually act as plant recycler after they die. They transform them into rich soils through some microbiological activities unseen to our eyes. It is believed that if not for decomposers, mushroom and fungi, the Earth would have been buried in several feet of debris, meaning that life on the planet would already have disappeared or would soon disappear. The oldest mushroom discovered was said to have existed 90 million years ago, and some of the oldest living mushroom colonies are said to be fairy rings growing close to the famous Stonehenge ruins in England. This ring is so large that it was said that they could best be seen from airplanes. Mushrooms have been discovered not only to be nutritionally and medically rich alone, but can also be used for production of dyes for household use.



Mushroom generally grow towards sunlight. This suggest that sunlight is important for its growth like in plants but it is yet unknown to scientists how mushroom make use of light. All they could say is that it uses light and it is never one of those organisms that photosynthesize. Mushroom conducts biological processes such as bioremediation.

This means it absorbs and digest harmful as well as dangerous substances as oil, pesticides and huge industrial wastes in environments that are threatened by all of these. That suggest that it is an environment purifier in its own little way.

The world of fungi simply hold many secrets and by growing mushrooms, you are probably venturing into means with which the many mysteries of the fungi world will be revealed.

### Choosing the right mushroom to grow

Just like the many crops that have been discussed that you can grow in your homes and backyards, growing mushrooms at home begin with choosing the right kind of mushroom to grow. There are no exact right choice to choose but below are some of the popular choices you could grow indoor;

Oysters mushroom

White button mushroom

Shiitake mushrooms

After you have selected which type to grow, you would need to purchase spores of your mushroom of choice from a reputable store. Spores act like seeds in plants and spawn could be likened to seedlings. You could also grow mushroom with spawn. In fact, spawns are easier to handle and grow faster into mushrooms.





### Medium of growth

In contrast to many crops, the different mushrooms known have different growing mediums. Some, especially the shiitake mushroom are grown on hardwood sawdust, white button mushroom are grown on compost manure, while oysters mushroom finds it comfortable living on straw.

### Growing edible mushrooms at home

After you must have chosen which mushroom interests you to grow and have secured the best medium for its growth, all other steps of growing mushrooms are basically the same and common to all mushrooms. You would need a cool, dark and damp location to lay your medium. This is usually best in a basement or unused cabinets and closets. What is most important is securing anywhere where you can create near darkness, while you can also control their temperature and humidity.



The best approach to this has been to place the growing medium in a pan and raising the area temperature to around 70 degrees Fahrenheit. Using a heating pad could help you accomplish this without much stress. After this is done, place the spawn on the growing medium. You could then drop the temperature to between 55 and 60 degrees Fahrenheit. This range of temperature is the best for growing mushrooms anywhere. You would also need to cover the spawn with little potting soil, preferable around an inch of that. You will then need to cover the soil with damp cloth, after which you would spray the cloth with water as it dries.

Barring all negative occurrences, you should see small mushrooms appear on the medium after three or four weeks. You would have to wait until the mushroom have their caps fully open and separated clearly from the stems before harvesting. It is as simple as that to grow your mushroom indoor.

You could try this project yourself as it is fun and worthwhile. This way, you could grow tastier mushrooms than you would buy at the stores in your own house.



## Growing Organic Tomatoes Indoors

### Quick facts about Tomatoes

Tomatoes are really great spice (fruits) for human food in a wide range of dishes, and a member of the deadly nightshade family which makes people get previously scared of eating it as it is thought to contain poisons because of its relation to belladonna plant. They are very popular in a lot of countries especially in Italy where it is given the name Pomodoro, meaning golden apple.

They have lots of nutritional benefits as well as rich histories that position them among the most sought after crops in the globe. Tomato consumption has been considered very beneficial for a lot of reasons especially as it contains lycopene, a substance which is considered vital for the health of prostate gland in men.

Tomatoes are popular crop all around the globe, hence the popular acceptance by almost all cultures, nations and global communities. There are over ten thousand varieties of the crop and they come in colors which ranges from pink, yellow, black, purple and white. As a widely grown crop across continents, the Food and Agriculture Organization (FAO) recorded that as much as 161,793,834 tonnes of the crop was produced in 2012, with China being the largest producer with as much as 30.9 percent of the total output. Although much of the crop production are done outdoor, country like Israel have managed greenhouse production effectively, and with simple indoor agricultural practices, you can also add to the world total output as well as you feed yourself comfortably with them from your backyard.



### Things to know before Growing tomatoes indoor

Before you start growing tomatoes, you must have information about its climate requirements as that would help you to give it the proper care and management. Tomatoes are warm season crops and this means that they would die back when cold temperature threatens. That been said, it must be noted that growing tomatoes indoor in the winter is a bad try except you have access to greenhouse production.

You may still try to manage some productions indoors during winter but be sure to have smaller outputs compared to when produced in the summer. Also, appropriate varieties of tomatoes that fit perfectly the climate of the growing region is really important a consideration. It is not just ending at this, learning tips and creative ways on how you can grow tomatoes indoors is really important as well. If you can manage all these, that fresh and sweet flavor you crave will most definitely be yours even all winter long.

### How to grow indoor tomatoes

Varieties, temperature requirement and planting.

Tomatoes belong to those range of crops that need full sun and at least eight hours of light for fruit production. Therefore, growing temperatures should be kept in the range of 65 degrees Fahrenheit (18 degrees Celsius) and more. This means that decisions on planting location should be strictly dependent on access to light. A south-facing window is largely ideal for indoor production. If you however do not have the window that suit this specification, you could install plant growing lights and grow the crop under them.



You could go as far as painting the location surrounding wall white color if this is what you can afford. This will aid light reflection to help tomato flowering and fruiting.

Also, severe attention has to be paid to how large the plant will get and what volume of output to expect. This suggest that you have to have enough details on the variety of tomato that will grow indoor. Some suitable varieties to try indoor include;

- Toy boy
- Florida Petite
- Tiny Tim
- Red robin

The small patio tomato is a recommended variety as it is ideal for indoor tomato production. It would even survive in a hanging basket. It is also worthy of note that determinate tomato plants do not usually get as large as the indeterminate ones. Determinate tomato plants produce all of their fruits in one shot and they are done. If you cannot distinguish between determinate and indeterminate tomato and you want to ensure continuous production, the best approach to this is planting a few different varieties, such that fruiting will occur in them at different times. You could also sow fresh seeds every month to keep tomatoes in your house all year round.

Planting of indoor tomato is quite easy. Get a container of at least 12 inches deep for the task. Using a good quality organic potting mix is equally very important. This will allow you to bury the stem all the way through to the bottom set of leaves if the container in use is deep enough. If all these are ensured, root formation all along the stems give you a stronger plant overall. Some varieties of tomato require support. When this is the case, the best approach is to install stakes or tomato cage. Try as much as possible to give the plant enough water and place them in the bright areas of the house.

## CARING FOR AN INDOOR ORGANIC TOMATO

### Fertilization

Tomato is not one of those crops that need serious watch. Once you have selected the right spots considering brightness, and the right equipment are used in planting, caring for tomatoes are not different from any other houseplant. Further care involves fertilizing the plant every week.

Weekly doses of fish emulsion or liquids will keep the tomato growing healthily. Vermicompost, sea kelp and fish emulsions are the best selections of fertilizers for indoor tomatoes.



### Watering and Pollination

Watering of tomato plants are also very essential. The soils in use must be checked regularly for water by inserting your fingers into the potting soil. If you don't feel water to the top of your knuckle, you might need to water the plant. Because tomatoes are self-pollinating, they do not need the help of insects or gardeners. However, you can assist pollination by shaking the stems gently every day or rather put a small oscillating fan in the planting area to mimic wind activities. If all these could be done, you would stop relying on supermarket tomatoes to feed yourself.

### Summary

Indoor tomato production is one of those ways to have flavored dishes in your homes all year round, especially as getting tomatoes in the winter might be a little difficult. However, a coordinated step by step approach including;

Identifying and choosing the suitable varieties

Planting tomato seeds in starting mix

Promoting germination with consistent heat and water

Moving your sprouting seedlings to a sunny location or artificially lit environment

Transplanting your seedlings to large pots in due time (after growing two sets of leaves)

Ensure a consistent watering of your tomato when dry

Creating your own day and night time light conditions for tomato growth

Fertilizing of tomato seedlings

Training your pot to grow or helping germination with stakes or tomato cages

Assisting pollination as much as possible since they are self-pollinated plants

Gathering your harvest in perfect conditions.

Will simplify the whole issue. No more need for refrigerators as you would always have your tomatoes ready and fresh in your garden.



## How To Grow Tomatoes From Seed Indoors

Tomatoes are not too difficult to grow and can often do as well on a sunny windowsill indoors as they do outside in a garden. If you live in a cold climate, they may in fact do better indoors than they would do out in the fresh air. Read on if you are interested in learning how to grow tomatoes from seed indoors.

Tomato seeds can be purchased from a range of different garden centres, plant nurseries or online sources. You can also try to germinate seeds from shop-bought tomatoes and sometimes this will work. Though to germinate your own seeds you will need to leave them for a while in a jar with a little water to allow the protective coating which prevents seeds germinating too soon to decompose.

When purchasing tomato seeds, decide whether you would like heirloom varieties (from which you can collect the seeds), or would prefer to go with a hybrid, which may have better resistance to disease. Choosing the right tomato seeds for the conditions where you live is key to success in growing delicious tomatoes indoors.

You have a wide range of options when it comes to choosing containers for growing tomato plants indoors. Usually, you will start tomato seedlings in a tray, then pot them up as they grow to progressively larger pots or containers.

Seeds placed in a moist, fertile growing medium should germinate within a couple of weeks, depending on the temperature. If it is cool where you live, tomato seeds may benefit from the extra warmth of a plastic lid for your home-made seed tray/propagator.

Since tomato seeds are best sown indoors early in the year, to have the best chance of a good harvest before next winter arrives, you may also like to think about investing in some simple LED grow lights if the light levels are low in January/February where you live.

When potting up small tomato seedlings, bury more of the stem in the soil each time. Doing this will help ensure that your plants develop good, strong root systems. Keep tomatoes watered, but avoid waterlogging. It is also a good idea to fertilise every couple of weeks, and more frequently, with a potassium-rich plant feed, when flowers and fruit are forming.

You can increase the crop of tomatoes by taking care to pollinate your indoors tomato plants by hand. Tomatoes are self fertile and are mostly wind pollinated, so giving your tomato plant a breeze and making sure it is not too humid indoors is usually enough. But to improve chances of a bumper crop of tomatoes, you can take an electric toothbrush to vibrate the plant, or can collect pollen and distribute it yourself using a small swab.

Even if you do little but watch your plant grow and keep it watered and fed, you will almost certainly end up with tomatoes to eat. Like so much else, they taste so much better when you grow them yourself at home!



## How to Grow Organic Strawberries Indoors

Strawberries are wonderful and popular fruits that can be grown indoors. Growing strawberries in containers can be very easy and more rewarding using a container than in a garden. This is largely due to because they can produce fruits quickly and require relatively a small space to grow. Indoor planting and growing of organic strawberry will allow you to control so many factors of growth such as humidity, temperature, and light. You can grow strawberries indoors and they will grow as if it were in planted in a garden.

In a nutshell, growing organic strawberries at home is cool and fun. All you need is to know the requirements you will need to start this indoor growth.

### Requirements for Organic Strawberries Indoor Growth

For the growth of strawberries indoors, these materials will be highly needed.

A strawberry pot - choose a pot that has drainage dents which will allow nutrition for your strawberry plants. You can use hanging containers to save some space.

### A potting mix

A strawberry plant - ensure that you buy your organic strawberry plant from a local nursery. Select a strawberry plant that is easy to grow and compatible with indoor and container gardening.

### Growth and Care of Organic Strawberries

Locate a section of your home that has a sufficient amount of sunlight for at least six hours. This will guarantee that your organic strawberry plant will get the needed sunlight. After you have found the spot that meets this condition, place your strawberry container or pot there.

Select the type of soil that will support the growth of your strawberry plant. Add soil to the pot until when you get few inches away near the rim of the pot. Make sure there is good drainage as well as compost for your soil as a good drainage will guarantee the disintegration of the compost to enrich the soil with nutrients for the growth of the strawberry plant. ,

Prior to the planting of the strawberry plant, you should remove runners and dead leaves. Trim the 4-5 inches after which you should soak in water for about an hour. Place the organic strawberry inside the pot. Ensure that the plant is standing with its roots pointing downwards towards the bottom of the container or pot. Afterwards, you can place the pot in the area where there is enough supply of sunlight for at least six hours.

The next stage involves feeding and nourishing the plant for proper growth. Water the strawberry plant properly every 3-4 days and be sure that you don't overwater it. Carry out a daily inspection of the plant to determine when there is undersupply of water. The leaves should be fresh, green and moist for a properly growing strawberry plant. If you detect scaly and dry leaves, this signifies insufficient supply of water and probably a high concentration of salt in the soil. Reduce watering once the strawberry plants start growing.

You can also feed your plant using organic composts in the stead of fertilizers. You can use worm composts or dead leaves to provide enough nutrients in supporting the growth of the strawberry plant.

You should carry out hand pollination. This is because your plants are not outdoors where bees will have to perform the pollination themselves. Strawberry plants are ready for pollination when the petals are wide open, the pistil is yellow-greenish and the stamen is brownish in color. You can use paintbrush or cotton swabs to transfer the pollen grains from the male part to the female part of the flower. This process isn't strenuous and doesn't take time to accomplish.

The strawberry plants can be best prevented from pests and diseases using organic agents. You can also use natural repellents to determine certain pests from coming near your plant.

You should cut off any runners running through the container. You can harvest when the strawberry is brightly red in color.

### **Health Benefits of Strawberry**

Strawberry has some fascinating health benefits. It is very good for the treatment of eye-related problems. This is because it contains antioxidants which counteract the effect of free radicals, reducing their concentration and healing the eye.

It is known to boost the immune system in prevention of diseases as it contains vitamin C. It reduces aging as it contains Vitamin C.

The vitamin C doubles also as an antioxidant which reduces the attack of free radicals in body cells. The attack of these free radicals to the body cells, in turn, causes ageing. Strawberry minimizes the concentration which in turn prevents premature ageing.

Strawberry plants are relatively easy to grow. With these steps, you will grow a tasty and palatable strawberry to give you its health benefits. Keep in mind that all the conditions for growth are met such as providing the right amount of sunlight, watering and avoid over watering when plants start growing etc.





## How To Grow Potatoes Indoors

Potatoes are a staple in many people's diets. You might imagine that you need a lot of space to grow them. In truth, it is possible to grow at least a few within your home – you don't even need to have any outside space. All you will need is a large container, like a barrel, sack, or large bag that you can fill with your growing medium, some seed potatoes, sunlight and water. With a little effort and a little ingenuity, you can grow far more indoors that you might ever have imagined.

### Containers for Growing Potatoes Indoors

Potatoes can be grown in many different large containers. A large barrel, bucket or bin that has been previously used to store food or drink might be ideal. Large sacks or purpose-made grow bags can also be used for this purpose, if placed on trays that will allow them to be watered without making a mess inside your home.

### Where to Place Containers For Growing Potatoes

The containers in which you would like to grow potatoes should be placed in a sunny place that does not get too hot. A sun room, porch or conservatory might be ideal, as long as there is adequate ventilation, though any sunny room that does not go through extremes of temperature would suit.

### Choosing Seed Potatoes

While it is possible to simply plant potatoes that have been bought from a store, this is not a good idea as these potatoes may be more likely to suffer from disease. It is better to buy specialist seed potatoes from a garden centre, plant nursery or online.

### Planting Potatoes Indoors

When thinking about how many seed potatoes to place in a container, a good rule of thumb to remember is that each potato will require around 10 litres (2.5 US gallons) of space to grow into. Typically, grow bags are designed for around three seed potatoes each. Each seed potato can provide a harvest of around 5-10 tubers, depending on variety, and a number of other factors. Put a few centimetres of soil/compost or other growing medium into your containers, then place your seed potatoes with eyes or chits (little green shoots) upwards and cover over with soil (around 10cm or so more).

### Caring For Your Potato Plants

As your plants grow, mound up soil/compost around them to encourage the formation of more tubers under the soil. Do this a couple of times, until the soil level is close to the top of your containers. The first tubers will generally be ready to harvest when the plants come into flower. Simply feel around in your containers to harvest the tubers for use in your kitchen.



## Growing Lemon Indoor

### Think you know lemon?

Probably the most widely used citrus fruit in the world today and an essential ingredient in many dishes, lemon originated from Asia but can be found in both the tropical and subtropical regions of the world nowadays. However, they were once very rare that kings present them to one another as gifts.

At the very tender ages, lemon usually do not appeal to kids but as times pass by, they end up liking the tangy flavor it gives recipes of chicken, cookies and most important cocktails. They also enjoy lemon zest and grated rinds in baked products. Subsequently, the love of lemon has moved considerably from kitchen to bathroom among a huge number of people as it is a newly found cleansing agent healing acne and removing blackheads, whitening teeth, lightening dark spots and blemishes, brightening hair color, strengthening nails, remedying dandruff, soothing chapped lips, cleans face and body as well as getting rid of oily skin. Lemon boast an incredible list of health and medicinal benefits courtesy of its most important component, the citric acid. Lemons are largely great sources of minerals (calcium, magnesium and potassium), Vitamin C and antioxidants that improve human body conditions.

There are no limits to the incredible powers of lemon as it has been confirmed that its scent can make one feel better when they are feeling blue. The product (Lemon) of a hybrid between a sour orange and a citron produces fruits all year round and a tree can produce up to 600lbs of lemon every year. The most common lemon types are the Meyer, Eureka and Lisbon, and California as well as Arizona reportedly produce most of the United States lemon.

### HOW TO GROW LEMON INDOOR



#### Quick facts about indoor lemon growth

There is no denying the fact that lemon has been widely grown outdoor and in gardens rather than indoors because of obvious reasons of low humidity, low air movement, low exposure to sunlight among others compared to outdoor growth, the fact is that with right care and maintenance, you can always have maximum performance from your lemon. Fortunately, lemon doesn't require a special care and planting management aside the normal citrus conditions.

Running out of space is no longer an excuse as with planting lemon indoors, you can always use pot or containers. You can always plant it on a patio, in terrain and in balcony where you would always be blessed with the scented flowers and soft yellow citrus fruits. Although there are a slightly huge list of lemon varieties, the Meyer grows comfortably in kitchens and balcony gardens especially in non-tropical zones. Growing lemon from a seed is not really a time conscious idea as it could take up to four years before having your first fruit. Instead, the dwarf varieties of the plant can always be gotten in nurseries as they especially suit the container medium. As earlier mentioned, aside the Meyer, other varieties that suits container production are Lisbon lemon and dwarf Eureka.

## STEP-BY-STEP INDOOR LEMON GROWING PROCESS

### Potting and planting



A planting pot that is as 25 percent bigger than the root balls of the seedling plant is ideal for lemon planting. Clay pots are advised as they are porous and evaporates water from their sides unlike the plastic pots. They prevent the growing medium from getting waterlogged and therefore preventing rot diseases. Soil quality and type is an essential consideration too. A well-draining organic potting mix is essential for a high yielding lemon plant.

### After-planting care

After planting, things to be done include repotting your lemon tree in some spaces of years just so to make sure your pot size is according to the scale of the tree. Ensure to use at least pots that are bigger in one size than the previously used pot every time you are repotting your lemon plant.

### Sunlight and humidity requirement

There no much reason to believe lemon are outdoor crops than their love for sunlight and humidity. All plants in the citrus family love sunlight especially when they started flowering. At least 8 hours of sunlight is essential for growth and in situations where this cannot be accomplished, you can make use of grow light to meet the requirement. As for humidity, 50 percent of it is ideal for growth. You can ensure this by placing the plant on a pebble tray and misting it or using a humidifier.

## Watering

Consistent water is needed for healthy fruiting. Too much or too little water may cause fruit drop, and in the most terrible cases, plant death. The top two inch layer of soil must be checked for dryness before watering, but windy or dry days may altogether require more frequent watering. Of course lemon trees are better grown indoor to avoid winds and so you might not be too worried about that.

## Fertilizer application and post-planting maintenance

To produce maximum fruits, special purpose citrus fertilizers are advised for every citrus specie plant. If of course unusable or scarce, slow release fertilizers like NPK 12-6-6 is a great alternative.

Lemon trees could still be affected by pest even when grown indoor and in pots. Prepare for pests like mealy bugs, aphids, scales and spider mites occasionally and get rid of them organically. This will prevent them perfectly and save you costs too. Lemon plants can also be pruned when their arms are getting too long or showing excessive vegetation which may affect fruiting.

## Harvesting/Picking

Time of harvesting depends a lot on the variety you are growing and the weather conditions they have been subjected along the line. Once citrus fruits gets off the tree, they stopped ripening. A ripe fruit however will be heavy, soft and yellow. Note that a citrus tree could be grafted to get two or more variety from a single tree.

Lemon is really a great addition to your growing list of homegrown plants.





## Growing Mandarin Oranges Indoor

Kids love oranges and having mandarin oranges in your hood may strengthen your parental bond with them. The mandarin oranges scientifically referred to as *Citrus reticulata* is a predominant tropical and subtropical drought tolerant small citrus tree with fruit resembling other oranges as likely expected. The oranges are usually eaten alone or in salads. The reddish-orange cultivar especially are often marketed as tangerines but that is not its botanical classification. They are structurally smaller, oblate and perhaps spherical like the common oranges, but their tastes are distinctively less sour, as it is stronger and sweeter. The common oranges are usually referred to as the mandarin hybrids but a ripe mandarin is firm to slightly soft. It is usually heavy for its size and pebbly skinned. As opposed most of the other common oranges in the citrus group, it has very thin peel with less bitter mesocarp that allows for the orange to peel and split easily into segments. Although the hybrid oranges have these traits as well but to a lesser degree. It's been traced scientifically that the mandarin, the papeda, the pomelo and the citron are all ancestors of the common citrus groups/varieties that have evolved through the hybridization process, however, the mandarin are all more important as they are the only sweet orange along the ancestral line.

No part of mandarin orange is a waste as the peel has reportedly been used fresh, zested or whole, and sometimes dried and used as spice in baking and cooking. Not only this, they have been used in drinks and candies. As traditional medicine, they have also been used to treat abdominal distensions to reduce phlegm as well as enhance digestion. All these among other nutritional and health benefits which include the fact that they are fat free, cholesterol free, sodium free and contain a good amount of vitamins A and C make mandarin oranges brilliant addition to your indoor plant set up. Being a tree plants, it offers your home a good ventilation through air purification too.

### Common varieties of Mandarin oranges

'Mandarin oranges' refers to an entire group of citrus fruits which include varieties such as Satsuma, Clementine, Pixie, Dancy, Honey and Tangerines in general. These varieties could be seed or seedless, but they are different from other citrus group in that they are usually sweeter and possess bright orange skin that peels easily before reaching its inner segments that are easily separated. Although mandarin oranges are usually called tangerines, such naming should be avoided because although tangerines are the most common variety of fresh mandarin oranges found in many places, the USA especially, but not all mandarin oranges are tangerines.



### How to Grow Mandarin Oranges Indoor

With the most important sets of materials needed being potting mix, container/pot, pruning shares, compost, manure, fertilizer and water, growing of mandarin oranges indoor follows a step by step method involving activities such as planting, care, hardening, re-potting and fruit management.



### Planting

The ideal indoor growing conditions for the orange is a roomy pot filled with rich, well-drained soil. A combination of peat moss, sand and vermiculite in equal portions make a nice loose potting mix for Mandarin oranges. You could begin to grow the plant with seed or seedling. In the case you begin to grow mandarin oranges with seed, let it stay in the container till it reaches a particular height when transplanting would not affect it. Planting with seed will however take a long time before transplanting.



Next is to get a growing container that is three times larger than the root balls of mandarin oranges. After this, fill the container with a well-drained fertile potting mix. The next step is to plant the tree from this container into a new container at the similar height it was growing in the original container. Then, place the container where it would have enough access to sunlight for growth. Rotate the sides regularly to ensure all sides have access to sunlight.

### Care of indoor mandarin oranges

Because you are not planting directly on the soil, watering becomes a regular activity. The plant absorbs plenty of water but will not tolerate a wet root. In fact it is not cold resistant. Water should be allowed to drain well enough between watering. Along the line too, you must ensure the plant is fertilized every three to four months such that its nutritional needs are always met.



Make sure to use high quality citrus fertilizer according to manufacturer's dosage, and do not allow the fertilizer to touch the trunk of plant or else they get damaged. Also make sure that they planting pot is got rid of weeds and other vegetation always

### Hardening of Mandarin plant

Hardening of mandarin orange plant is an essential thing to do when moving the plant outdoor or indoor for a season. The plant enjoys the summer but seek protection against the cold temperatures of the winter. Our advice is that growing container be moved indoor during winter, and that a steady temperature of between 60-80 degrees Fahrenheit be ensured. When the plant is moved from outdoor to indoor and vice versa for a very long time, the plant must adjust to its new condition. An hour's exposure to the new condition on the first day, increased by an hour or two daily until the tree is able to stay in or out for the whole day, allows it to adjust naturally to the new life. Ensure to harden the tree this way when moving it outdoors in the spring or indoors in the fall.

### Re-potting

This is another essential activity because the plant is a tree crop and would definitely grow expanded root structure as time passes. The root grows as the tree and so mandarin orange will soon outgrow its pot. A sign to look up to before changing the pot is that the plant growth slows down or the root begin to grow in a spiral format or even out of the drain holes. Repotting is done even before these situations are noticed with a pot that is at least 2 inches in diameter larger than the current pot. Make sure the new pot is placed onto a dolly or saucer with wheels before repotting for easy portability.

### Fruiting and Management

Indoor mandarin have lesser fruit capacity compared to garden ones because they are grown in small containers. However trees provided with ideal conditions including plenty of light and good care will produce fruits in proportion to their own sizes. Trees must flower and fruit within the first five years of planning on budded trees and they increase their capacity over time. Mandarin oranges are best stored in a cool dark spot for few days. However they could be refrigerated for up to two weeks to extend their shelf life.



Planting mandarin oranges will add massively to your meals' Vitamin C base and gets you closer to that all year round.