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Indoor Gardening

Taken from various articles from the net including Bob Ewing.

It is snowing here in Thunder Bay, snowing with some thunder and lightening tossed in, a truly interesting St. Patrick's Day. Yesterday it was Spring, you could almost feel the green. Today all is white again. Time to turn my thoughts from the backyard toward my indoor garden.

It is possible to create an indoor vegetable garden that is not hydroponics, nor requires any artificial lighting, difficult but possible. The first step is to determine which room or rooms in your home get at least 6 hours of sunlight per day. If you want strong healthy plants, you will need all this time. This week we will focus on vegetables, next, herbs. Once you know the amount of space you have you can begin to design your indoor garden.

It doesn't have to be expensive, if you don't want to buy containers, you can recycle, your ice cream or margarine tubs. Punch a couple of holes in the bottom and use the lid as an overflow tray and you are set. You will need to get the seeds you have selected started. This is a crucial stage and will determine how successful your garden will be. Your choice of potting soil is important. The container will be the plant's home and if it is to be a happy home, then the soil needs to nurture the plant. I, always add a little bone meal to the mix.

You may find that starting your seeds in peat pellets and then transplanting them to the containers is the safest way to go. The seedling is minimally disturbed this way. I find that tomatoes thrive on this gentle treatment. Select a variety that has been bred to grow in a container as this will increase your success considerably. The determinate varieties work best as their growth is limited and if you have a tight space then this may matter. You could also consider growing tomatoes, the small ones, cherry types, for example, in a hanging basket, as long as they get sufficient light.

Lettuce will do well indoors. One head per large ice cream container. If you understand how plants propagate then you have begun to gain the knowledge that enables you to garden with success indoors. You may not grow, a lot of food, but you will be able to add to your table fresh food that may have traveled as little as 3 feet. Indoor gardening

requires your constant attention, both tomatoes and lettuce, love water, but if you over water, they may rot. Get to know your space where the garden will be and then get to know the plants. Kids love to garden, you could give them a little space for their own.

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Growing Food Indoors

Just because it's winter, doesn't mean you have to stop growing food. While it might be cold and blustery outside, there are a number of edible plants you can grow indoors. Some of my favorites are herbs. Growing herbs indoors successfully is all about selecting the right varieties and having the right conditions to grow them. You can go two ways with indoor herbs: (1) start new plants from seed or buy transplants to grow inside, or (2) bring mature annual or perennial herbs into the warmth of your home. I like doing a little of both.

Here are some tips for growing herbs inside in winter. I hope it inspires you to give it a try.

Bringing Herbs Indoors

Window boxes filled with rosemary and parsley can be moved inside before freezing weather.

You can grow many herbs in pots outdoors in summer and fall, and bring them indoors before a killing frost. Some of my favorites to grow this way are parsley, rosemary, and chives. There are a few things to keep in mind before you bring these herbs indoors:

- Check plants carefully for any hitchhiking pests and spray the leaves with horticultural oil or insecticidal soap to kill them.
- "Harden" plants off before you bring them indoors just like you'd do in the spring when moving plants outside. Each day bring the plants in for a few hours, then move them back outdoors again. Gradually increase the amount of time spent inside. After a few weeks, they can stay inside permanently.
- Don't worry about a few dropped leaves. Light levels in a house, even in a sunny window, are much lower than outside. Older, larger leaves will drop off and smaller, low-light-efficient leaves should form in their place. Some perennials, such as chives, like a dormant period in early winter, so leave this pot in a dark, unheated basement or garage for a few weeks before bringing it indoors to resume growing.
- Cut back on watering and fertilizing mature plants. They don't need as much moisture or nutrients inside as they do outdoors.

Starting New Herbs

It's easy to grow fresh herbs from seed or seedlings on a windowsill or on a table. You just need the right materials.

Although a sunny window looks bright in winter, the available light can be only 1/10th of what's needed for plants to grow properly. That's why it's best to grow herbs under grow lights. Select full-spectrum lights and leave them on for 12 to 14 hours a day. Keep the tops of the herbs close to the bulbs and the plants should thrive.

After lighting, soil is next in importance. Grow seedlings in 3- to 4-inch-diameter pots and use only sterilized potting soil mixes that are light and airy. Many culinary herbs require well-draining soils so the lighter the soil the better.

Supplement the potting soil with a liquid fertilizer when watering. Use a half-strength formulation to encourage new growth. Water plants less often but more thoroughly, and only when the soil is actually dry to the touch. Add water until it drains from the bottom of the pot. Keep the air temperature on the cool side (60° to 65° F) for the best growth.

Varieties to Try

Try growing these herb varieties. They have compact growing habits and pack a flavorful punch.

English mint (*Mentha spicata*) - Perhaps the best-behaved spearmint variety (not as invasive as others, and the leaves are broader and deeper green).

Spicy Globe basil (*Ocimum basilicum minimum*) - Dense, compact form of basil, 8- to 10-inches tall. The leaves are smaller than regular basil, but taste and smell great.

Blue Boy rosemary (*Rosmarinus officinalis*) - More compact and diminutive than standard rosemary, reaching a height of just 24 inches. Flowers freely and has excellent flavor.

Dwarf Garden sage (*Salvia officinalis* 'Compacta') - Smaller leaves and more compact than regular sage, growing only 10 inches high.

Stevia (*Stevia rebaudiana*) — Used as a natural sweetener, the leaves are 10 times as sweet as sugar. Purchase seedlings as seeds are difficult to germinate. Keep plants cool and the soil slightly moist.

Secrets for better indoor growing -

There are many reasons for growing indoors, raising exotic plants, such as orchids, that require a different environment than is available where you live, or to produce fresh food year round. There are several factors involved in growing healthy plants indoors.

1. Light: Light is one of the basic needs plants have to live, grow and thrive. Winter's outdoor levels of light are inadequate for the majority of plants to do anything more than survive so if you are growing indoors you will have to have supplemental light.

Supplemental light falls into two categories as far as plants go:

- High Intensity Discharge (HID) fixtures and bulbs are expensive. The bulbs create a lot of heat and are somewhat dangerous, as well as drawing a lot of power, which can make indoor gardening a hobby you spend money on instead of a hobby that pays for itself.

- Fluorescents do not put out nearly as much light as HID's so you will have to invest in more fixtures and bulbs to create a similar level of supplemental light. They create little heat and usually plants can grow in direct contact with the bulb without harming the plant. Higher color temperature (5000K and higher), daylight deluxe, or other bulbs are the best, however having a mixture of bulb types in a room will offer a better balance of light. Just bare in mind that the light from lower color temperature bulbs (4000K and lower) or cool light bulbs give off more red spectrum and can be thought of as the sunrise/sunset spectrum of light. Grow light bulbs are a complete waste of money. Daylight deluxe bulbs have a better blend of light and are way cheaper, especially if you go to a Lowe's or Home Depot and buy a case of bulbs.

- All other forms of light, such as incandescent, halogen, and neon are generally unhealthy for plants and should be avoided.

2. Growing medium: What you grow your plants in is extremely important, especially when you are growing in containers. I recommend a blend of 75% sphagnum and 25% perlite. This combination holds moisture well, conducts nutrients well, keeps appropriate oxygen levels in the soil, if you do not drown it, and it drains well. Adjustment to the medium content can be made to meet the special needs specific plants, but I use this blend for about 90% of the types of plants I raise.

Adding a soil inoculants is also important as plants rely on symbiotic relationships with several types of soil born micro organisms. Adding some bits of natural hard wood charcoal (not ashes) can enhance the growth of the beneficial fungi and bacteria. Read articles online about Terra Preta for a better understanding.

3. Water: The most critical skill to master if you want healthy plants is to learn how to water properly. Over watering drives oxygen from the soil, kills beneficial micro organisms, encourages the growth of anaerobic bacteria (causing root rot) and leaches nutrients from the soil. Not enough water causes root damage. The best way I have found to deal with watering is to keep the soil moist enough that you can see and feel it is not dry, but not so wet you could get anything from it with a paper towel. Depending on the containers you use hefting the container will give you an accurate estimate as to the water content of the soil in the container, far better than touching or visual cues, which might reflect only the soil moisture on the surface.

4. Containers: The roots of your plants need darkness, moisture, nutrients and oxygen in order to grow and perform their critical processes. The best containers I have seen to date are those made from road construction felt. Next best are the net pot plastic containers designed for orchids because they provide good drainage and soil aeration. Clay and ceramic planters tend to either dry out the roots or become a host to an algae and slime mold colony. (Certain orchids do well in clay pot, but otherwise avoid them.) Those without drainage are not good for most plants as they encourage anaerobic bacteria growth and tend to drown roots.

5. Nutrients: This is really too plant specific a topic to discuss in general terms. The nutrient needs of each type of plant is so different that the only way to become proficient

with the plants you grow is to follow the recommendations of experienced growers and use trial and error and study them on your own until you find what works best in your unique growing situation. But in general terms I reiterate the importance of introducing inoculants into your soil to form a supportive biome in the soil. Mycorrhizal fungi blends are useful for extending the effective reach of roots and aiding the plant in digesting nutrients. There are also rhizobacteria which are nitrogen fixing bacteria. Other inoculants contain antagonistic organisms which attack plant pathogens.

This is a rapidly evolving field. Do some research, this will pay off in a level of consistent plant health that make everyone think you have a green thumb.

6. Air Circulation: Plants need carbon dioxide, which is a very tiny part of our atmosphere, (about 0.0383%), and they need physical stimulation to grow healthy, strong stalks. Air movement across the surface of leaves increases transportation which means evaporation the of water from the plant and thus draws more water from the roots, and with it nutrients, up through the plants and is critical to the growth of most plants. Those few plants that require high levels of humidity tend to not like constant rapid air movement so much, but they still need an ongoing air exchange to increase CO₂ levels on the leaf surfaces.

7. Protection from Pests: In a nut shell the best way to deal with pests in an indoor garden is prevention. Don't track in pests and you'll never have to deal with them. If you develop a pest problem you will have to research the best course of treatment based on your personal preferences and situation. Generally speaking I believe that natural solutions are best, if they work. There are many organic and completely safe pesticides available now as well as many beneficial insects and nematodes that can be employed. If you are growing food or plan to grow food ever in the soil of the plant you are treating, you would be wise to refrain from using cheap chemical pesticides that will contaminate the soil and never use a systemic pesticide that must be absorbed from the soil into the plant, as you can never get rid of the poisons introduced into your soil mix that way. There are many plants that do well indoors and many others that are nearly impossible to grow indoors without a significant investment in technology. Search for information about the specific plants you are interested in and follow the recommendations of those already successfully growing what you want to grow. YouTube is an excellent resource for detailed information about growing specialty and common plants. Just do a search for the plants you wish to grow. It may take you a few hours to sort out the videos that are of no real value to find the few that will tell you exactly what you need to know, but it is time well invested.

Most of us have houseplants, but have you ever considered growing edibles indoors? Better yet, how about growing delicious, organic produce? Forget the gardener's woes of winter's inhospitality. Forget the city-dweller's complaints about the confines of yard-less living. There are no excuses anymore for not having a bountiful garden. And, growing produce indoors not only provides you with healthy, affordable organics year-round – the plants will also help keep your indoor air clean, which is especially important during stuffy, winter months.

Here's how to get started:

1. Pick a place. You can grow a wide variety of herbs, vegetables, and even fruits in containers on windowsills, shelves or tables. R.J. Ruppenthal, author of *Fresh Food from Small Spaces: The Square-Inch Gardener's Guide to Year-Round Growing, Fermenting, and Sprouting*, even has tips for using closets and empty bathtubs. Your only limitation is your imagination.

2. Start simple. Ensure immediate success by beginning with surefire winners like herbs, sprouts and lettuce. Take it up a tiny notch by growing a pizza garden (basil, oregano, cherry tomatoes) or a salsa garden (cilantro, onion, tomatoes, peppers). There are specific varieties of vegetables and fruits that fare best in containers. You can find a list of them and the specific size of container they need at Garden Guides. Find seeds on-line or look for a local organic nursery or seed company that you can visit in person. Check out the list of suppliers at GreenPeople.org.

3. Collect containers. Almost any type of container can be used to grow your plants: terra cotta pots, ceramic pots, wooden window boxes, metal tubs, glass bowls, ice cream buckets – pretty much whatever you have on hand. Choose the appropriate size based on each seed's recommendations. Some plants will have to start out in peat pots and transplanted, some can go straight into the container. Drainage holes aren't necessary if you don't over water, but that's hard to tell unless you're an experienced gardener. So, opt for something with holes (or make a few yourself using a drill or hammer and nails) and place a pan underneath to catch excess water.

4. Select soil. Many commercial potting soils have synthetic additives. So, to truly grow organic, you need to look for the "OMRI Listed" label. The OMRI—Organic Materials Review Institute—determines which products can be used within the national organic program.

5. Find a fertilizer. Again, to really grow organic, make sure you're using an OMRI-listed fertilizer. Some plants only need to be fertilized when you sow the seeds, but others like more regular feeding. Read your seed package or talk to your local nursery to learn what's best for the varieties you've selected.

6. Look for light. Some plants need more light than others. Many will fare well in a sunny window and many like the added boost of a grow light. Some species don't need light at all (like mushrooms!) Check out these organic mushroom indoor growing kits.

7. Prepare for pests. Growing indoors means far fewer potential pest problems, but you should still be ready to battle bugs (without toxic chemicals). For example, whiteflies and mealy bugs can be controlled with a yellow sticky trap or diluted rubbing alcohol (though test your plant to make sure it won't get burned).

Whether you decide to grow leafy greens such as lettuce, spinach, and endive; herbs like basil, thyme, and parsley; or produce like cherry tomatoes, dwarf beets, and blueberries,

indoor organic gardening can save you money and protect your health. Also, it's fulfilling, fun, and the food is delicious!

Sep 21, 2010 – Winter gardening indoors

If the weather's getting cold and you haven't planned ahead, don't worry. There are plenty of salad varieties that you can sow now for tasty leaves, even in the depths of winter. This guide from Garden4less.co.uk, an online retailer for all your garden supplies, tools and plants will allow you to enjoy fresh produce through to Christmas and the New Year by 'Growing your own' indoors.

Sowing without soil

To spice up your sandwiches, try cress 'Extra Curled'. All you need is a saucer lined with kitchen towel, cotton wool, or even an old flannel. Moisten your chosen medium, and simply sprinkle with the cress seeds. Cover with a plastic bag, then place in a warm spot (such as the airing cupboard) until the seeds have germinated. When the seedlings begin to emerge, place on a well lit sill and remove the plastic covering. Ensure that the medium is kept moist, and you'll be enjoying the fresh sprouts in 10 to 14 days time. We also stock sprouting rocket, which can be grown in the same way and makes a delicious addition to your lunchbox.

The winter windowsill

Many of our seeds can be grown on a cut-and-come-again basis during the colder months. This means leaves can be picked as required, rather than waiting for the whole plant to mature. After harvesting the plants will replenish themselves, and successional sowing ensures a steady supply for weeks on end. For a wide variety of leaves, try our niche salad leaf mix. This collection includes leaf carrot and radish, kale, amaranth and purslane, perfect to break the monotony of supermarket salads. Rocket is another excellent choice for indoor sowing, and has a hot flavor far superior to the shop-bought variety. For leaves in a hurry, try 'Skyrocket' which combines the speed of salad rocket with the taste of the stronger wild rocket. At Garden4less.co.uk we stock a great selection of Salad Seeds suitable for winter and summer growing.

Hot crops

If you lack a bright windowsill or wish to grow more exotic vegetables, garden4less has the equipment to get you started. To give seeds a good start, try a heated propagator. If you are a new gardener and would like to experiment, the Parasene Fastgrow is great value for money and promotes rapid germination. For greater precision, the Bio Green offers digital temperature control for seedlings and cuttings.

Shed some light

When light levels are very low, some plants may fail to thrive on the windowsill. An indoor grow light provides the perfect solution, enabling you to get a head start with your spring sowing.

Making every dollar work for you makes economical sense, especially when it comes to a LED UFO light. They use very little energy, generally just a little more than a typical living room lamp. A 90-watt growing LED light can produce as much light as a 400-watt HPS bulb and cover 12 feet of space. The lights aren't even noticeable on your electric bill, no more than leaving the front light on all night.

Plant Grow Lights

for Indoor Gardening

Supplemental Greenhouse Lighting

Plant grow lights for indoor gardening and supplemental greenhouse applications, including spot grow bulbs, standard horticultural fluorescent tubes, compact fluorescent bulbs, high output (HO) T5 fluorescent tubes, fluorescent fixtures, HID/HO fluorescent hybrid fixtures, compact HID metal halide and hp sodium grow light systems, full size remote ballast HID metal halide and HP sodium grow light systems, replacement bulbs, reflective mylar, replacement parts, system components, more...

Fall & Winter Vegetable Planting Guide

Fall and Winter gardening, although an old practice, is an excellent solution for keeping the tilth and fertility of your garden's soil at its peak levels. At the same time it yields crops of delicious vegetables throughout the fall and winter that cost a fraction of produce purchased in the supermarket.

When it comes to vegetable and flower gardening, the climatic patterns of the lower elevation areas west of the Cascade Mountains in Washington, Oregon, Northwestern California, and British Columbia are quite suitable for Fall & Winter gardening. Winter low temperatures range from 35oF. to 45oF. with occasional cold continental arctic air outbreaks lowering it to +20oF. to 0oF. or so. The garden soil can freeze 3 or 4 inches deep for short periods, but the usual winters are not severe enough to damage carefully mulched winter vegetable plants.

Many southern areas of the U.S. are actually more suited to winter crops, while some northern regions have to rely on cold frames, hot beds, or greenhouses.

The key to successful winter gardening is knowing the average date of the first killing frost in your region (for example late October in the Pacific Northwest). You then plant your winter crops early enough to let them reach their full maturity before that killing frost. Local garden authorities can give you information about the timing of first frosts and the hardiness of various crops for your area. The planting suggestions in this booklet are based on a late October first freeze. If your killing frosts come earlier or later adjust accordingly.

Late maturing crops - Approximate maturity 90 days. Plant by mid July for fall harvest, later for spring harvest.

ROOTCROPS

Beets

Carrots

Parsnip
Rutabaga
Globe Onions
LEAFCROPS
Brussels Sprouts
Cabbages
Cauliflower
Fava Bean

Mid-season crops - Approximate maturity 60 days. Plant by mid August. Use any of the dates from above as well as the Best Dates below.

ROOTCROPS
Early Carrots
Leek
Turnip
Kohlrabi
LEAFCROPS
Early Cabbages
Winter Cauliflower
Collards
Perennial Flowers
Perennial Herbs
Swiss Chard

Early maturing crops - Approximate maturity 30 days. Plant by mid September. Use the dates from the previous page as well as the Best Dates below. The latest dates are for warmer climates, later frosts, or protected plantings.

ROOTCROPS
Chives
Bunching Onions
Radishes
LEAFCROPS
Broccoli
Cover Crops
Leaf Lettuces
Mustard
Spinach
Lawn seed

LENGTHENING YOUR GROWING SEASON
Windbreaks and Walls

You can add from 10oF. to 15oF. of warmth to your fall and winter garden by taking advantage of windbreaks and walls. Many gardeners have discovered by surprise that a south-facing wall of the home, shed, or greenhouse is ideally situated for constructing easily built structures that use the free solar energy of the sun.

Cloches

Cloches provide an elevated warm climate around your winter row crops. They can best be described as portable green houses of various designs that work with solar energy to warm the immediate row or plant they are placed over. Many designs have been tried. Ideas range from very stiff wire frames holding glass panes, to clear gallon-size plastic bleach or pop bottles with their bottoms removed.

All cloches have two drawbacks to consider. First, on bright sunny winter days they have to be manually ventilated, to prevent excessive heat build up. Second, poorly constructed or "staked-down" cloches can become kites during winter windstorms.

Cold Frames

Cold frames are permanent structures that considerably lengthen the growing season. They are an excellent way to grow fall and winter crops. Cold frames provide protection from strong winds, elevate the daily and nighttime temperatures around the plants, and protect frost sensitive vegetables or flowers. They are easy to build and the vegetables and flowers in them will require minimal care. In short season areas, a cold frame will allow you to start seed up to 8 weeks earlier than you can outdoors.

You can use an old window sash of any dimension to build a cold frame. Fiberglass or polyethylene can be used if the glass is broken. The ideal cold frame is built about 18 inches at the back and 12 inches at the front. The slope allows rain to run off and affords a better angle for gathering the sun's heat.

Your cold frame should face south for maximum exposure to sunlight. Also select a location with a slight ground slope to provide adequate drainage away from the frame. To provide ventilation, partially open your cold frame during sunny, warm weather. During cold snaps, cover the cold frame with burlap or heavy cloth to provide extra warmth.

Hot Beds are cold frames with a source of bottom heat. Today, that heat comes from electric heating cables. A few hot beds are still constructed using the old method of a layer about a foot and a half thick of decomposing manure beneath the soil of the cold frame as the source of heat. Either way the hot bed remains frost-free during the winter.

See Also: Cold Frame Gardening

Greenhouses

Greenhouses are structures that provide frost-free climates all year around. There are perhaps as many designs for greenhouses as there have been imaginative gardeners. Unheated greenhouses are great for raising seedling crops of many of the most delicious leafy and root vegetables. Greenhouses can also be heated for raising tropical plants.

Some greenhouses as far north as North Pole Alaska have been used for extensive winter production of commercial crops of tomatoes and cucumbers.

Raised Beds

Permanently edged raised beds have been used for growing vegetables and flowers for centuries. They may be made of stone, bricks, concrete, or with either treated or untreated lumber. (These beds are made with untreated 2X10s.) The soil in a well made and maintained raised bed can be between 8 and 12 degrees F. warmer than the same soil in the surrounding garden areas. Another advantage is the lessening of the need to bend over to work in, or harvest from, the raised beds.

Single plant raised beds can be made from old tires stacked together. The black tires absorb heat from sunlight, warming the soil even more than ordinary raised beds. They are great for growing tomatoes, peppers and potatoes during the spring growing season and are good for crops like cauliflower and broccoli during the fall and winter.

See Also: Raised-bed Vegetable Gardening, Wide Row Vegetable Gardening

MULCHING

Late October-early November is an excellent time to begin preparing the vegetable garden for normal cold winter weather ahead. Mulching serves many purposes in the winter garden. In addition to insulating the plants with a blanket of protection over the root system, it will help discourage the winter growth of weeds and pesky grasses. Mulch also helps reduce evaporation of moisture from the soil during dry periods. During winter's heavy rainstorms it helps prevent the soil from eroding away.

The most common materials used for winter mulching are peat moss, bark, sawdust, and shredded newspapers. Both sawdust and bark leach nitrogen from the soil. Therefore, steps must be taken to replenish this nitrogen before replanting. We recommend a layer of one to two inches of mulch material. The best winter crops to protect this way include beets, carrots, onions, parsnips, rutabagas and turnips.

Occasionally, dig down through the mulching material and check to see that the soil has sufficient moisture. Plants that are in dry soil will not survive the winter as well as plants that are in moist soil.

As spring begins, and the sunlight warms the soil, a layer of mulch prevents the soil from warming. Remove or spade in the winter mulch to enable the sunshine to reach the soil and warm it as soon as possible. Seeds can be sown much earlier in unmulched soils.

ROTATION OF VEGETABLE VARIETIES

This is a very critical part of any garden scheme. Do not plant the same fall or winter vegetable crops in the same location as they were planted the previous year or the summer season. It is important to note that if the same crop is planted in the same

location, not only will the soil be weakened through continual loss of the same nutrients but the plants will also attract the same insects and diseases to that part of the garden.

COVER CROPS - GREEN MANURES

Even though a portion of your acreage or garden lies idle for a time, the soil can be built up by growing cover crops. Cover crops are fast growing green plants that can be chopped up and spaded, plowed, or tilled into the soil, adding green organic matter that then composts into humus. Plants of the Legume family also add nitrogen to the soil. Some cover crops can be spaded into your garden and with others it is better to cut off the green tops, add them to the compost pile, and spade only the roots left behind into the soil.

In the Fall, sow the following cover crops to turn into the soil in Spring: Alfalfa, Austrian Field Pea, White Clover, Alsike Clover, Crimson Clover, Red Clover, Purple Vetch, Hairy Vetch, Woolly Vetch, Common Vetch, Fava Beans, Wheat, Oats, Cereal Rye, Winter Rape, and Lupines.

The following are some Warm Winter Cover Crops: Cowpeas (Southern peas), Hairy Indigo, Bell Beans (a small Fava Bean) Lana Vetch, Winter Peas, Lupines, and Purple Clover. See Also: Cover crops

Quick Tips

Try successive plantings of quick growing items like leaf lettuce, beets, spinach and radishes.

Don't be afraid to try planting some crops later than recommended. While it is a bit risky, the rewards are definitely worth the risk.

Harvest over-wintered carrots early in spring before they start to go to seed and the roots get woody.

Self-blanching celery makes an ideal crop in cold frames if planted during July.

The Chinese Cabbages and Mustards also grow especially well in cold frames. They taste great, too.

Parsnips are best when pulled in January or early February after the heaviest frosts have turned them the sweetest.

Try using cheesecloth or clear agricultural cloth over rows of leafy crops. It will keep out pests and may hold in a bit of heat.

Keep a record of what you planted and when, and what succeeded or failed to help you do better in the future. We hope this guide, combined with your own experience, will help you have a bountiful late season garden.

Crops Suitable for Winter Harvest

So, if you are going to grow and harvest in the winter, what exactly can you grow? The varieties of winter vegetables are many, but they aren't going to be things like Tomatoes, Melons, Eggplant and Peppers – plants that love warm weather.

They will be cold crops and other cold weather vegetables that enjoy cooler temperatures and can withstand below freezing weather.

Let me say that again. There are vegetables that can withstand below freezing weather – even weather that dips into the teens and lower. If they are still with us after a night in the teens, you know these are winter vegetables.

Late fall to early spring crops will include things like:

peas - radishes - kale - Brussels sprouts - cabbage - broccoli - onions - lettuce - beets - turnips - salad greens - Swiss chard - kohlrabi - turnips - collards

These vegetable types aren't necessarily suited to planting and growing in the winter, but they will allow a harvest in much of the winter months that are considered off season to the normal summer gardener.

I dare say that you probably don't buy this many different types of produce at the store on a regular basis, so having this sort of variety available in your yard in the middle of the winter should satisfy even the most finicky of vegetable eaters.

Many seed companies publish a fall catalog just for those who want to grow "off-season."

Territorial Seed Company has a fall/winter catalog, and it features 24 pages of cold crops (cabbage, broccoli, kale, Brussels sprouts, etc.), root crops, alliums (onions and garlic), lettuce, European greens, Oriental vegetables and spinach that are all suitable to cool and cold weather gardening. It's not like we don't have a wide variety to choose from when it comes to winter vegetables.

Watering in the Winter

Water will be stopped when we start to get consistently cold temperatures. This should help avoid killing the vegetables when a hard freeze sets in. It is my understanding that water in plant cells freezes and ruptures the cells with a hard frost. Backing off on the water late in the fall should avoid this problem.

This is the same advice I was given for some of my trees that are heavy drinkers – back off on the water in the fall and they will survive the winter with less damage to external branches.

If your winter vegetables have moisture from the fall, but no added moisture during the winter, they most likely will last much longer even in temperatures well below freezing. My lettuce plants survived temperatures of about 12 degrees, and didn't show any signs of problems. They like it warmer, but are capable of making it through nights that would kill most other plants.

We only harvested in the warmth of the day this spring, and we had great results. I understand that if you don't allow the plants to warm up for a while, you might be harvesting mush in the middle of the winter. Several hours above freezing is necessary for the plants to recover from the deep freeze. I'll let you know what I add to my "learn by doing" database this winter.

My experience with broccoli and kale show their affinity for cold weather. I planted both of these cold weather vegetables in the spring and they began to grow rather well in the cooler weather and lengthening daylight. Once the hot days of summer set in, they slowed their growth to a crawl. They were in a kind of suspended state waiting for cooler weather.

When the summer vegetables were giving us their last fruits and showing signs of stress because of the consistently cooler days and nights, the broccoli and kale started growing again as if someone had turned on a switch. How nice it was to see something in the garden that appreciated cooler weather.

Oddly enough, these and other winter vegetables enjoy cooler weather and can tolerate frost out in the open. My plan this year is to plant these crops during the fall inside the protection of the greenhouse. They should stay in an environment that is to their liking for most of the fall, winter and spring, and provide us with food during the winter when other summer crops are long gone.

Cold Tolerance in Vegetables

Q. You have often mentioned cold tolerant vegetable crops and those which are very susceptible to frosty injury. Could you list these and temperature lows which they can tolerate?

A. This is very difficult to do and be accurate since cold tolerance depends on preconditioning. For instance, if broccoli has been growing in warm conditions and temperatures drop below 22 degrees F., it will probably be killed. If these same broccoli plants had experienced cool weather, they would probably survive the sudden cold.

In general, a frost (31-33 degrees F.) will kill beans, cantaloupe, corn, cucumbers, eggplant, okra, peas, pepper, potatoes, sweet potatoes, squash, tomatoes, and watermelon.

Colder temperatures (26-31 degrees F.) may burn foliage but will not kill broccoli, cabbage, cauliflower, chard, lettuce, mustard, onion, radish, and turnip.

The real cold weather champs are beets, Brussels sprouts, carrots, collards, kale, parsley, and spinach.

Growing plants indoors is especially fun and rewarding. When you are able to eat delicious vegetables from your plants it is even more exciting. Indoor gardening is a wonderful tool for those who have very little space and for those who are unable to bend. Indoor gardeners also love the fact that there is very little weed problem, no hot sun shining down on them, and it is so much easier to have good soil without covering a large area.

Indoor vegetables can be grown easily in any pot or container. Plastic is less expensive usually, but anything will work. Plastic gets hotter than ceramic containers. Ceramic containers seem to be the favorite among indoor gardeners. The most important part of the container is making sure that there is drainage in the bottom. If you are using plastic or metal containers, using an ice pick or another sharp object easily makes holes.

Different gardeners will tell you different ingredients to prepare the best soil. The soil should be lightweight and drain well. A mix that works well is an equal amount by volume of silica, sand, perlite and forest mulch. There is another favorite of equal parts of sharp coarse sand, native soil and compost or peat moss. If your vegetables are growing in hanging containers, you will need a light mix of equal parts of perlite, black peat moss and vermiculite. All nurseries also have premixed mixers, but you will pay a little more for these.

Getting the containers ready for planting is easy. After you have established the fact that there is adequate drainage, add the mixed soil. The soil should be lightly packed. If the soil is packed too tightly, there will be problems with root development, drainage and aeration. When you fill the container with soil, make sure there is between one and two inches of space at the top for watering.

It is best to stick with the same basic schedule for indoor gardening as you do with outdoor gardening for when to plant which vegetables. You can start vegetables from seed much easier indoors because you don't have to wait for certain weather conditions. As the seeds sprout, make sure that you thin them. One squash or broccoli seed will make a very large plant. Starting your indoor gardens from nursery purchased plants is fun because you have instant beauty in your containers.

Cherry tomatoes are especially fun. They will continue to grow for a very long time as you continue to pick off the little tomatoes. They are very pretty. They can be grown with or without stakes to hold them up, depending on your preference.

Herbs are another favorite for indoor gardeners. They are perfect for container gardening. Many of them are very attractive and will spill over the containers. Most also have a very fragrant odor. Mint, rosemary, chives and cilantro grow best in the cooler months. They can be grown from cuttings, seed or transplants.

Plant stands are an excellent way to show off your indoor gardens. They come in many varieties so let your imagination run wild. Plant stands can be easily made with bricks and any boards. Window sills, ladders, ledges, shelves, tables, and just about anything, can be used to make a beautiful indoor garden.

Garage sales are a perfect way to purchase inexpensive plant containers. If you decide to paint your containers, make sure that you only paint the outside. Painting the inside could contaminate the soil and give you all kinds of growing problems. If you are using spray paint, make sure that you cover the top of your container while painting. Sponge painting is an excellent way to decorate your containers. Take any sponge one half to one inch thick, cut into any shape, dampen the sponge and dip lightly into any ceramic coat paint. Most people use too much paint in sponge painting . Sponge a couple of times onto another surface first before sponging your containers. Your indoor garden becomes a bright, lovely area with a little paint.

The only downside that is usually found in indoor gardening is the watering. Plants grown in containers need more care and more attention than plants grown outside. Outside you can use timers and irrigate with drip systems. Indoor gardeners need to water by hand and more frequently because plants dry out faster in containers. If you are patio gardening, this is especially important. Sometimes new, small plants have to be watered more than once a day.

Enjoy your indoor gardening. It's fun, inexpensive and rewarding.

Vegetable gardening is a favorite pastime for many, especially for those of us who love to cook with fresh vegetables and herbs.

However, in order to grow your own vegetable garden, its common thought that a big open space in your yard is needed. The good news is that this is not the case.

If you are someone who doesn't have a lot of room outside, consider using indoor containers for your vegetable gardening. By gardening indoors, you may not be able to

garden big vegetables and your options may be limited, but there are definitely some benefits to indoor vegetable gardening with containers.

The Types of Vegetables Best Suited for Indoor Container Gardening

For indoor gardening, you will want to use smaller vegetables, so things like corn are probably out of the question. However tomatoes, cucumbers, bell peppers and even green beans or carrots can be viable vegetable options for indoor container gardening. Anything that can be contained in some type of container without being cramped and restricted from growing well can work well for your indoor garden, and these fresh vegetables will make a world of difference in your cooking.

The Kinds of Containers to Use

For indoor container vegetable gardening, containers that have wholes in the bottom are the best to use. This gives the soil a chance to eliminate un-needed water which otherwise would kill your vegetables. You simply place the container on top of a deep dish that can catch the water, and empty the dish every so often depending on how much water the vegetables discard.

Depending on the vegetable, large containers used for plants can work well. Tomatoes, cucumbers and bell peppers do well in plant containers. For vegetables like carrots or green beans, you'll want to use narrower, longer containers. These kinds of containers offer a row like garden, similar to what you'd find outside for these vegetables.

The soil used should be specifically for vegetable gardening, and the kind used outside will do just as well inside. You'll probably want to make sure and find a place for your indoor container vegetable gardens that has access to light during the day, but keeps the vegetables safe from frost and chilly nights at the same time. If you can't find such a place, find one of each and simply move them from one place to another when necessary.

After just a few weeks of indoor container gardening, you should find that your vegetables are growing nicely and are ready for picking shortly. If you keep up on the replanting when it's time, you can have fresh indoor vegetables throughout the entire year.

Healthy natural vegetables and indoor container vegetable gardening will help you stay well. Learn more and see what is available when it comes to indoor vegetable gardening at [Tips On Indoor Gardening](#)

Reasons for growing indoors:

- More control over heat, light and water.

These are all necessary for growing healthy productive vegetables . Some vegetables need more care and attention to these details than others. You can have more control over cold temperatures by adding in heaters. If you live in a cloudy climate perhaps artificial

light from grow lights is needed to grow during the winter months. The amount of water in an outdoor garden is often uncontrollable because of the weather. You can always add water to a garden, but taking it away when you get too much rain is impossible. Growing indoors you can totally control the amount of water your vegetables get.

- Shelters and protects plants.

Some vegetable plants need lots of heat to grow. The area I grow in is quite high in elevation so the nights are cooler even in the summer, so I grow my tomatoes , peppers , eggplants , cucumbers in walk in tunnels so they get the warmth they need to grow well. If you live in a cold climate and want to grow in the off season your plants will be protected from snow, too much rain and the cold by growing them indoors.

- Pest and disease free plants.

Indoor vegetable gardening can be a way to prevent certain pests or diseases. I have had problems with tomato blight in the past as I live in a wet climate. After losing a whole crop of tomatoes one year I now only grow them in a walk in tunnel. Since then I have never had a problem with blight.

Flea beetle is another pest in my garden. I cannot grow any oriental greens unless I have them covered. Again the walk in tunnel gives the plants the protection they need.

- Extend your growing season.

Often in the off season (in Northern climate this is October to February) it is cool and wet or cold and snow covered or a mixture of all of these. So how do you grow veggies during this cold weather season? Indoor is definitely an option for you. Learn what vegetables will grow best in your off season climate. Here is a list of cool season vegetables to get you started.

- Healthy transplants.

Indoor space is needed to start and grow transplants especially if you want to start in late winter or early spring. Seedlings need warmth and shelter to get a healthy start. I often start tomatoes in my kitchen in February and move them to my greenhouse after a month or so. This gives me a head start for selling, or planting in my own garden. Learn more about starting your own seedlings and the best time to start your favorites.

With indoor gardening it is important to keep things simple. Consider why you want to grow indoors, how much time do you want to put into it, what you want to grow and then look at what conditions are needed for this vegetable to grow to maturity. Answering these questions will help you to find the best structure for your needs.

How to Grow Indoor Vegetable Garden

Start by deciding what are the vegetables you want to grow, and the amount of space you will allocate to your vegetable garden. Try to grow plants that are seasonal and native too. For exotic and rare vegetables, one may need a greenhouse. All plants need sunlight, without which they cannot make their food through the process of photosynthesis. So,

your indoor vegetable garden should be located in a south facing window or terrace. Just follow a few gardening tips given below.

While doing indoor gardening, you need to keep your plants light requirement in mind as the season changes from winter to summer. An alternate light source, like diffused lighting, should be kept as a handy option. One can find commercial garden lights for this specific purpose, but a simple florescent base with grow bulbs will also work equally well, and they are cost efficient. Besides light, you will need to ensure that your plants receive a good amount of air circulation. So, while planning the number of containers you will have in your indoor vegetable garden, make sure there is adequate space between them as cluttering them will damage their growth, and inhibit yield production. Hanging pots, containers, and /or raised beds can all be incorporated in an indoor garden.

Select different sized containers and pots. They should be able to support the eventual size of the plant. Clay pots are considered best, as there are reduced chances of water stagnation while using them, but make sure that you have dishes placed under them, else your area will get clay stained. Hanging pots can be your normal plastic containers, as the holes made in them allow for water drainage. Fill three-fourth of the pot with lightweight humus rich soil. You can make a good mix by mixing one part of each; potting soil, peat, vermiculite and perlite. Read more on:

- Soil Science

- Container Gardening

Most green salads can be raised directly by sowing seeds. Sow seeds as directed on their package. Keep enough space while planting saplings. Water these plants well, and leave them undistributed. It would be best to invest in a few garden thermometers, as they would help you determine the light and water needs of the plant as they are growing. Try growing compact varieties, as they are best for indoor planting. Watering should be minimal, or as per requirement. Feed the plant with slow releasing organic liquid fertilizer every two weeks. One of the advantages of growing vegetables indoors is the avoidance of pest and insects. A timely check, along with pruning and treatment with insecticidal soap and solutions, if essential, will protect the crop from damage.

Types of Vegetables to Grow Indoors

Variety Vegetables

Greens Spinach, lettuce, beets, chicory, watercress, coriander, mint, kale, cos, celery, chard, etc.

Vines and Runners Sweet green peas, tomatoes, aubergine, peppers, green beans, asparagus cucumbers, gourds, etc.

Roots and Tubers Potatoes, carrots, onions, turnips, garlic, ginger, radish, beet, yams, etc.

Other Vegetables Okra, cabbages, cauliflower, artichoke, broccoli, mushroom, sweet corn, pumpkin, etc.