

Expert Prepper's Family Survival Garden Guide



**Feed a Family of Four
with Four Square Feet**

How to Make Full Use of a Limited Gardening Space – Why It Makes “Cents” To Avoid Dangerous Genetically Engineered Foods Today



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An Introduction to Vertical Gardening: How it Developed – How You Can Make It Work for You

In the 1700s and 1800s, people who made use of the land had a lot of acreage available to them. However, people, today, needless to say, must be creative in their approach to gardening. Both urban and suburban gardeners as well as people living out in rural areas have learned to make the best use of the space allotted to them. In this land-challenged environment of ours, we've found that vertical gardening is the best way to garden when space is limited.



Vertical gardening has taken hold as a way to produce both edible and decorative plants. Even city dwellers who live in apartments have found that vertical gardening makes it possible for them to enjoy floral plantings as well as consume the herbs and the plants that they sow.

Therefore, this report and guide is designed to inspire just about anyone who enjoys gardening now or who wants to learn the concepts of gardening in a limited space. So, even if you live in a small dwelling and don't have any more space than what a patio or balcony can afford, you can make use of vertical gardening to produce wholesome and beautiful plants.

A Positive Way to Garden

Getting Started: Why Vertical Gardening is a Good Concept

Vertical gardening is indeed a positive way to cultivate plants. After all, the space you use is directed upwards. What's good to know too is that many plants can adapt to

growing vertically, even if their usual tendency is to grow horizontally. Not only that, this method of gardening permits you to double the space you have at your disposal.

Therefore, in small vertical garden spaces, often stakes and trellises are used. These vertical gardening aids can be utilized to train plants that regularly sprawl in their containers or across the ground. As a result, you can train sprawling vines to grow vertically rather than overtaking too much of an area.

Not every gardener has expanses of acreage with which to work. In fact, some urban and suburban gardeners have produced beautiful gardens on a patio or balcony. They were able to do this by fully utilizing a vertical space rather than trying to plant across and out.

You won't need to fork out a lot of money either for this kind of planting. Trellises only need to be constructed with a bit of twine and wood stakes. You can also use a fence in your yard to support a container plant, whether the ballast is made of chain link or constructed with wood.

Formulating a Plan: Thinking of a Theme

That all being said, you'll still need to design a vertical garden plan. Include the plants you want to grow in your garden and decide on what space or spaces will be used. Also, you may want to establish your garden around a theme. Herbs are great choices for vertical gardens and therefore are nice plants to incorporate into a *healing garden* theme.

“Form and Function are One”

Or, perhaps, you want to grow an array of vegetables and fruits. Naturally, plants that grow on vines are an obvious choice for vertical gardening. After all, when you are making good use of space, you want to make sure that form follows function, so to speak. Or, as the famous architect Frank Lloyd Wright said, “Form and function are one.”

While Wright designed houses, you can still take that concept and extend it to your garden's layout when planting vertically.

Decorative, Edible Plants

When you take Wright's view, you'll not only choose plants that enhance your landscape or surroundings, you'll also pick them for their functionality too. That's why growing vegetables and herbs vertically causes us to pick plants that are not only aesthetic to view but which are good for us to consume.

Vines – The Ideal Plants for a Vertical Garden Scheme

Therefore, when it comes to selecting plants for a vertical garden, vines are an obvious choice. Not only can the plants adorn a barren wall, they also make beautiful additions to trellises, fences and patios. Needless to say, multifunctional plants, in the form of vines, should be considered, if not included, in a vertical garden plan.



Perennial Vines

Perennial vines are superb vertical garden plants as they continue to produce fruit during the growing season. Just make sure the vines are anchored to a sturdy trellis or a split rail fence. Also, the plants should receive a daily dose of sunlight for six or more hours per day. Test the soil to determine fertility or the soil's pH. If you're planning to plant vines on a larger landscape, make sure you avoid the spots in your yard where frost is typically seen. As climates vary, you'll want to find those perennials that grow the best in your locale.

Types of Perennial Vining Plants

Perennial vines that are grown in a garden include grapes, blackberries, raspberries, kiwis and passion fruits. Management of the vining plants is easier when, again, they are solidly supported by a trellis. When their root system is established then, the plants can reliably produce food.

Perennial vines require pruning in the wintertime and thinning in the summer. Also, make sure that the vines you purchase are certified as being disease-free. Mulch the vines heavily to keep them healthy. If you grow grapes, net the fruit to keep birds away from your crop.

Annual Vines for a Vertical Garden

Annual vines do not need the same strong support as perennials when they are grown vertically. Use such support systems as wood teepees, arbors, or trellises. Like perennials, place annual vines at sites where they'll receive the sun's light at least six hours each day. Check the fertility or pH of the soil with a soil test kit.

Popular Annuals: Melons, Peas, and Beans

Because some annual plants can take a while to mature, you'll want to make sure that you choose plants that take less time in this respect. Annual vines can be fully utilized in a vertical garden setting to grow small melons, peas, or beans, all which can provide you with healthy yields in a short a time span. Fertilize the vines when you first plant

them and, again, later in the growing season. That way, you can be assured the vines will continue to produce fruit or veggies.

Growing Cantaloupes

If you grow small melons or cantaloupes, you can propagate the fruiting plants in a container first. Place the container in close proximity to a supporting structure, such as a trellis. Use cradling supports, such as panty hose remnants, to tie the vines to the structure.

Training Peas and Beans

Use poles, trellises, or stakes to grow peas and beans. Natural supports, such as just-pruned branches, can be anchored in the ground to support upward vining.

Growing Cucumbers

Cucumbers, which grow on vines, also adapt well to vertical garden spaces. A tropical veggie, the cucumber plant supplies a plentiful amount of fruit in warm temperatures.

Because cucumbers are susceptible to the cold, don't set the plant into the ground until the temperature of the soil is dependably warm, or about three weeks after the final frost.

***A Couple Tips for Growing Lemon Cucumbers**

Lemon cucumbers, which are a good choice for pickling, produce a rather long vine.

Therefore, you'll want to make sure you provide a tall trellis for the plant. Test the soil to make sure it's fertile or has a pH of about 6.5.

A Large Support System

Needless to say, vertical gardening requires a support system, all which should include stakes, twine, ties, fencing, and trellises. When vines begin to climb, make sure you direct them up the support you've selected, keeping an eye on them daily when they are first planted.

Vertical Plants in a Garden Space Place More Demands on the Soil

Mulching is a Priority

Free-spirited vines can easily snatch onto supports and fencing as well as other plants.

Because the plants are more closely spaced when they take up a vertical area, they also place more demands on the soil. Therefore, you'll find that it's important to mulch or to use more organic fertilizer or compost.

Tomatoes – Ideal Plants for a Vertical Space

Tomatoes are perfect fruits (yes, they are fruits, not veggies) to grow in a vertical garden, whether they are the determinate or indeterminate type. Determinate tomato plants naturally grow upright and produce tomatoes in a fast amount of time.

Indeterminate tomatoes, on the other hand, can take quite a while to produce fruit.

However, once the tomatoes appear, they'll be seen until the first frost. The indeterminate type of tomato plant needs to be tied to a stake so it continues to grow vertically. Often the tomatoes are grown in cages so they'll keep growing upwardly in their space.

So, when space is limited, vertical gardening is a great solution, especially in the case of tomatoes. Tomatoes in vertical gardens ripen faster and do not exhibit the ground blemishes of tomatoes that aren't vertically grown. Plus, vertical grown tomato plants are less susceptible to slugs as well.

The Urban Vertical Garden

Vertical gardening, when used in urban locales, is a great way to beautify a balcony or patio, or camouflage an unattractive view or building. City gardeners also find that this kind of garden design creates less safety hazards as plants are displayed in hanging baskets, pocket planters, or on shelves rather than on the ground in containers or pots.

Pocket Gardens for Patios and Balconies

For example, urban garden designs make use of pockets made out of recycled plastic. Presented on three tiers, six pocket planters measure approximately a foot across and can hold about 1 1/2 gallons of compost and/or soil.

One-tier Flower Boxes Featuring Recycled Plastic Pockets

The lightweight structures take up no more of a space than an area measuring 2 feet long and spanning about 2 1/2 feet wide. For planting herbs or flowers, you may want to consider a one-tier flower box made with two planter pockets. Each pocket, again, is around one foot across and holds around 1 1/2 gallons of compost and soil. Not only can you incorporate these designs onto a small patio or balcony, they can also be included in an efficiency apartment as well.

Vertical Gardening is All About Space Utilization and Planning

So, no matter where you plant your vertical garden, the idea is to use up vertical space rather than a horizontal area. Yes, it's true, plants grow upwards. However, the term *vertical gardening*, again, refers to optimizing the planting space by choosing to plant upwards instead of outwards. As a result, each plant is positioned so it is trained to grow along a structure that is upright, whether that structure is a wall, chain link fence, trellis, or stake. Plastic planter pockets or trays can be affixed to barren walls to convert

the space into a green wall too. Vertical gardens, when the space is maximally used, may be referred to as sky farms as well.

Vertical Gardening – Easy On Your Back

So, whether you are creating a gardening space in your small backyard, on a plot in the country, or on your urban rooftop, you can enjoy growing plants as a hobby. Plus, vertical gardening saves your back as you don't have to spend a lot of time bending over or weeding your plants.

Almost Any Kind of Plant Can Fit into a Vertical Scheme

While vine plants are ideal vertical garden plants, again, you can plant a whole host of other plants too. If you make use of trays and planter pockets, you can plant onions, spinach, tomatoes, baby sprouts (extra nutritious), and a number of herbs. Flowers and decorative plants can also be planted vertically as well.

Thinking Outside the Window Box

Planting vertically then allows for a great deal of creativity. You're not limited in what you can use. Use such supports as mobile walls, wood frames, arches, poles, shoe organizers, tube planters, tripods, or wire cages. Construct the garden's architecture from scratch or buy a garden design that's been pre-assembled. It's up to you. Vertical gardening makes use of living architectural themes and designs.

Better Understanding the Concept

As discussed previously, vines are natural to a vertical garden design. Other plants, such as tomatoes, cucumbers, grapes, leafy greens, and pole beans, merely need to be trained to grow vertically. For the non-vining variety, you can easily incorporate a plant in a vertical set-up. Such gardens make use of pockets, trays, or shelves. Therefore, the entirety of a small space can feature pre-manufactured towers or showcase a wall that highlights shelves or trays.

So, the idea of the vertical garden then isn't really all that hard to understand. Once you establish your space, it functions much in the same way as a traditional garden, except that it makes better use of space, is much simpler to maintain, and, again, will not cause you lower back pain.

A Small Space that Returns A Lot in the Way of Dividends

As a result, there are many good reasons why people are taking to planting their plants vertically. However, the primary reason is that a vertical garden takes up little space and can easily supply sustenance to a family of four or even a large family of six.

Tower Gardens (Aeroponic Designs)

A tower garden, which makes use of an aeroponic design, is an excellent example of how plants can provide large harvests in a limited amount of space. In fact, a balcony is the perfect space for a tower garden, which usually is contained in an area that measures about 24" x 24" dimensionally. Use the tower to harvest delicious and nutritious food, such as lettuces, cucumbers, snap peas, watermelon, or tomatoes.

Include such herbs as mint and parsley too. Using a tower garden system can save you as much as \$15 per week on your food bill.

A Space-saving, Environmentally Friendly Way to Grow Plants

While optimizing an area is the primary reason for making use of a vertical space, vertical gardening is also an environmentally friendly way to grow and harvest plants.

Many manufacturers who produce vertical gardening containers use materials that are either recyclable or biodegradable. Pesticides are not used in vertical gardens either as the design encourages the use of organic pest control solutions over commercial applications. Some people construct their vertical designs by utilizing PET plastic bottles. Sides of the bottles are cut open and attached onto a wall or vertically designed platform.

The Indoor Vertical Garden

The survivalist will do very well with an indoor vertical garden. To have a successful harvest you will need to add a few extra steps to the process.

1. **Growing lights:** Even if your Vertical Garden setup is near a window you will not have a full yield if you don't give your plants the necessary amount of light. Most hardware stores will carry incandescent grow lights and specialty grow lights for your needs... It is also wise to stock up on these bulbs.
2. **Reflectors:** Since you will be growing more in a small space you will want to maximize each plant's exposure to their daily dose of sunlight. Reflectors will assure (if placed correctly) that each plant gets enough light.
3. **Ventilation and air flow:** When using banks of artificial lighting for your indoor plants, care must be taken that you don't over heat your plants. Extra heat, even a small amount can be detrimental to your plants. A fan, a cracked window or a simple ventilation system will be all you require.
4. **Water:** Water is a vital resource when it comes to survival and that last thing you want to do is over water your plants. Be sure to follow the specific watering needs of each plant, and setting your plants in trays will help you pool and reuse any excess water.

5. **Read the care labels:** Each seed packet or plant you buy these days will list out its daily water, light, temperature and soil needs.

Be sure, that in addition to the guidelines in this book, you provide your crops with these 5 additional requirements. Anything done outside can be accomplished in a bunker 10 feet under ground... all you need is a little

Determining How Your Garden Will Be Established

Before you decide on a specific space or garden design, you'll need to make the following determinations.

- **Will you be using a permanent or temporary structure? For example, if you're living in an apartment, then you'll probably want to utilize a temporary structure. Lighter frame walls with wheels for mobility are therefore better choices. Naturally, if you plan on residing in your home for quite some time, you'll want to make use of heavier, less mobile supports.**
- **Research the plants you plan to include with respect to their growing**

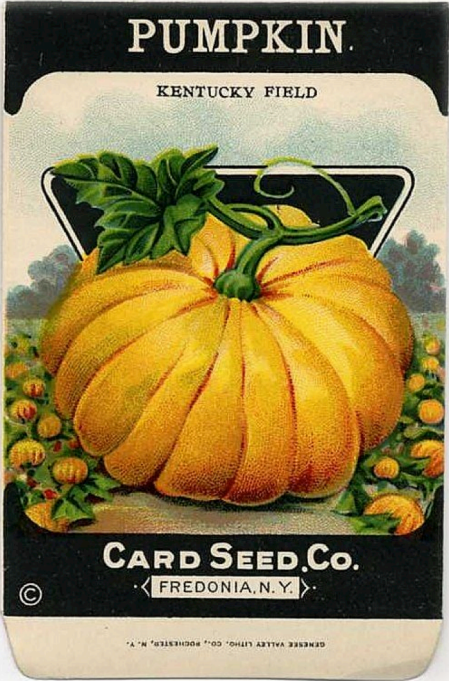
needs. How much shade or sunlight is recommended to support propagation? Familiarize yourself with your plants' watering and sunlight requirements.

- **Of course, since space is what vertical gardening is all about, you'll want to consider the dimensions of the structure you'll be using as well as the design. While a lower lying garden is more susceptible to damage, a structure that is built too high can cause difficulties with regards to plant care. So, make sure the height, width, and weight of the support structure are in good balance when you install your garden.**
- **Speaking of weight, you'll also have to consider the weight of the plants you plan to grow and harvest. Therefore, you may need individual structures to accommodate the load of some plants. For instance, supports, such as stakes or trellises, will be needed to support heavier plants, such as pumpkins, or provide direction for guiding and shaping them. Include these kinds of supports as part of the design or keep them**

camouflaged from view.

- **You'll also have to consider regulating the temperature as well. That means you don't want to expose your plants to an excessive amount of cold or hot, or to too much humidity.**
- **Decide on the building materials for the framework of your garden. For example, if you're constructing a wood frame, cedar is an excellent choice as it is a noted pest deterrent.**
- **What's the theme of your garden? You can make use of several vertical garden ideas. For example, you can establish a sprout garden, a cooking garden that includes herbs, a fruit garden (melons or tomatoes), or a vegetable garden.**
- **Include a healthy balance of plants, such as cucumbers, lettuces, squash, and sweet potatoes into your veggie garden. Or choose herbs, such as parsley, rosemary, thyme, oregano, or garlic in an herb garden scenario.**

Plants that Provide the Most Efficient Yields



Tomatoes – The Top Producer

That all being said, certain vegetables are considered more efficient than others when it comes to producing yields. For example, tomatoes, when using supports, prove to provide the most efficient yields.

Classifications of Tomatoes

Determinate Tomatoes

As previously mentioned, tomatoes are classified as determinate and indeterminate tomatoes. Determinate tomatoes stop growing when they reach a certain height. The fruit ripens in about a month after its first appearance. Determinate tomatoes are usually used for canning or for use in sauce recipes.

Indeterminate Tomatoes

Indeterminate tomatoes continue to produce fruit throughout the season and usually need extra support, or taller stakes. Because the tomatoes tend to produce a lot of

shoots, they are frequently pruned and supported with a tall trellis. Indeterminate tomatoes are used throughout the growing season for sandwiches and salads.

Other Top-producing Plants – Listed According to their Yield Efficiency Index

Other plants, in order of their yield efficiency, are listed below.

1. Onions;

2. Leafy lettuces;

3. Turnip greens;

4. Squash;

5. Pole beans;

6. Peas;

7. Beets;

8. Bush beans;

9. Carrots;

10. Cucumbers;

11. Sweet peppers;

12. Cabbage;
13. Leeks;
14. Collards;
15. Okra;
16. Kale;
17. Cauliflower;
18. Eggplant;
19. Brussels Sprouts;
20. Celery;
21. Melons;
22. Winter Squash; and
23. Pumpkins.

Therefore, the plants that are higher on the list are more efficient producers with pumpkins being the least efficient producer of the vertical gardening or space-saving

plants. Use the above listing to make notes about each plant when establishing a gardening design and theme.

Vertical Gardening – Planning a Space

Cultivating a Plan

When you draw up a vertical garden plan, you'll want to consider the following:

1. *The types of plants you will be planting.*

2. *The earliest planting dates.*

3. *The kind of soil and drainage.*

4. *The amount of sunlight.*

5. *Cultivation.*

6. *Local climactic conditions.*

7. *Vegetable or plant preferences.*

Making the Most of a Vertical Space: A Case in Point

To give you an idea about how much food you can harvest per 100 square feet, consider the amount of sustenance you can obtain from squashes and sweet potatoes, both which do well in a vertical scheme. Each plant can provide as much as 100 to 200 servings per 100 square feet. Pole beans can provide as much as 80 servings in the same designated area and kale can supply as much as 100 servings. So, as you can see, vertical spacing can reap big dividends to a family of four to six with respect to their physical wellbeing and budgetary health.

If you're setting up a plot for a vertical garden, measure two feet to an inch for a small space. Include a variety of vegetables or fruits that can be harvested both earlier and later in the year. If you live in the north, tomatoes can only be planted once during a growing season.

However, successive plantings are suitable if you live in a warmer climate or in the southern section of the U.S. Suggested fruits and vegetables include beans, tomatoes,

squash, sweet potatoes, cucumbers, small melons, and a number of lettuces and greens.

Growing Baby Plants and Sprouts

You'll also obtain great nutritional value from baby plantings or sprouts, which can be harvested before they become fully mature. Plus, you don't need to possess a green thumb to grow and harvest the mini cuisine. Again, vertical gardening provides a more healthful solution as you don't have to worry about wilted produce or be prevented by the fear of eating veggies or fruits that aren't organically pure.

How Sprouts are Used: Some of the Varieties

Sprouts often are used in Asian cooking, introduced as soybean or alfalfa sprouts, or grown as baby plants, such as Alaska green peas, sunflower greens, garlic chives, daikon radishes, and crimson clover, each which provides different and interesting tastes and provides superior nutrition.

Vitamin-Packed Produce

That's because sprouts can contain as much as 500% to 1000% in B vitamins, an abundance of enzymes, and added protein for cellular development and growth. For example, sunflower sprouts contain 4% protein, compared to Boston lettuce, which contains a little over 1%. Alfalfa sprouts also supply a sizeable amount of protein as well.

You Can Harvest the Plants Anytime You Like

As a result, sprouts are an excellent, inexpensive source of nutrition. Plus, harvesting two pounds of alfalfa greens begins with sowing only 10 tablespoons of seeds. Not only that, if you grow the vertical harvest inside, your organic garden is available anytime you like, whether it's the dead of winter or the middle of July.

Sprout Bags for Vertical Garden Designs

Today, sprout bags can be included in a vertical garden scheme that makes sprouting quick and simple. The sprout bag only needs to be dipped in water twice to take care of

your plants' watering needs. You'll find that vertical gardening then requires far less water, and will save you a substantial amount on your water bill annually.

Leafy Green Sprouts

You can grow a variety of plants in a vertical sprout garden. Feast on leafy greens, such as alfalfa, clover, buckwheat, or sunflower. Or add such favorites as cabbage, garlic, or radishes.

Bean Sprouts

Bean sprouts come in the form of garbanzo, soy, mung, green peas, lentils, and adzuki, all which are great additions to soups or sautés.

Grain Sprouts

Or grains, such as barley, kamut, rye, or wheat are vertical garden choices that can be included in breads, crackers, or even burgers.

Seeds for sprouts have almost infinite shelf lives (about 40 years), as long as they are kept in a dry and cool place. When you add water, the seeds can germinate to as much as 15 times their overall volume.

The Benefits of Growing and Harvesting Sprouts

Needless to say, using sprouts in your vertical garden scheme has a large number of advantages, namely:

- ***Self-sufficiency – you'll have less of a dependence on food that is commercially grown.***
- ***Year-round availability if the sprouts are grown indoors.***
- ***Easy care – sprouts only need to be maintained, during their growth stage, about a couple minutes each day.***
- ***Nutrient-dense – sprouts are packed with enzymes, minerals, and an abundance of vitamins.***
- ***A large selection – you can choose from a large variety of delicious sprouts.***

- ***Pure – sprouts grown in a vertical garden are free of pesticides and 100% organic.***
- ***Inexpensive – sprouts only cost you about 25 cents per pound to grow.***

Upward Not Outward

Therefore, vertical gardening can involve harvesting baby sprouts or herbs or training vegetables to grow upwardly. The whole idea, again, is to make the best use of space, whether you need to use hanging baskets, shelves, containers, a wooden frame, metal trellis, or teepee. Upward, not outward, is the motto for anyone who supports a vertical scheme.

Therefore, your vertical garden can be turned into a living wall or become a combination of hanging baskets, shelves or containers featured on a balcony. Or you may design and build your own frame, including built-in shelving and cross supports, which can be added to a patio or deck.

Other Space-saving Garden Designs

Plants that do well in a vertical garden can also be used in other space-saving designs, such as hanging gardens, raised beds, or container gardens on a balcony, patio, or deck. Just make sure that your vertical installation is ready at the time you plant your plants as adding the plants later can damage their vines and root systems.

Climbers

Choose such climbing plants as:

- *Peas;*
- *Butternut or Acorn Squash;*
- *Tomatoes,*
- *Green Beans;*
- *Lima Beans; or*
- *Pole Beans.*

If you want to add these plants, make sure that you have the space to include such supports as a frame or trellis.

Non-climbers

Non-climbing plants that are well-suited to a vertical garden may include:

- ***Carrots;***
- ***Herbs;***
- ***Potatoes (either sweet potatoes or potatoes – either of which can be planted in a container);***
- ***Lettuce;***
- ***Radishes;***
- ***Eggplant;***
- ***Onions; or***
- ***Leafy greens.***

Where to Find Non-GMO Seeds

One of the most important reasons you are growing your own food is to avoid Genetically Engineered foods and more importantly finding seeds that are not controlled by the chemical giants (like Monsanto)

A little refresher: *GMOs or Genetically Modified Organisms* are plants or animals that have had their genetic makeup altered to exhibit traits that are not naturally theirs. In general, genes are taken (copied) from one organism that shows a desired trait and transferred into the genetic code of another organism.

What's So Bad About GMOs?

Nearly 300 experts agree GMOs not proven safe and have significant restrictions or been outright *banned in over 30 countries across the globe.*

They are widely grown and used in the food supply in the United States. Since GMO labeling doesn't exist...yet. There is no way for consumers to know for sure if their foods contain GMOs.

Whether they are good or bad is a moot point. You owe it to your family to keep these out of your meals.

My favorite spot to get GMO seeds is from SeedsNow

Seeds Now is a family owned operation right outside of Los Angeles, provides 100% non-gmo, open-pollinated and non-hybrid seeds. Their mission is simple:

To help families and communities understand the importance of growing their own

Organic/NON-GMO food – wherever they might live. It's about growing your own,

supporting local growers, and knowing where your food comes from.

www.SeedsNow.com << **Check Them Out Now**

The Criteria Used When Selecting a Gardening Spot

When considering a location for your vertical garden, make sure that it meets the following criteria:

- *The site should receive at least six hours of sunlight daily – the usual amount required by vegetable plants.*
- *The garden should have a southern exposure, if at all possible.*
- *Situate your vertical garden close to a water source.*
- *Locate the garden away from shrubs or plants that will either shade your garden from its required source of light or compete with your plants for water.*

What to Do if Your Location Does Not Receive a Good Deal of Sun

If you don't have a sunny locale in which to grow your plants, then choose leafy vegetables for your garden, such as spinach or lettuce, both which thrive well in areas that receive partial or full shade.

Set Up a Small Garden at First

Start with a small garden so you don't become overwhelmed. And pick herbs, sprouts, fruits and vegetables that are your favorites to eat. You can always add more plants later after you become familiarized with this unique gardening scheme.

Vertical Herb Gardens



A Cloth Shoe Caddy for a Vertical Herb Garden

A great vertical herb garden that you can set up, either in the country or the city, is made with a cloth shoe caddy. You'll need the cloth caddy, compost or potting soil, and hardware (such as nails or hooks or a shower rod) for hanging the gardening aid.

Choose a Spot to Hang Your Caddy

When you hang the caddy, choose a fence in your yard or build a small wood frame on your patio. Affix the caddy to the fence or frame with hooks or nails, or hang hooks and a shower rod. Make sure that the fixtures can support the weight of the water, soil, and plants. Also, check the drainage. You may need to make a few holes in the fabric in order to meet the drainage requirements.

Fill the Caddy with Soil and Then Plant Your Plants

Then, all you need to do is fill the pouches of the caddy with compost or soil. Fill each pouch almost up to the top. Allow about an inch between the soil and uppermost part of the pocket. Then plant your seeds or plants.

Two Herb Garden Suggestions

(1) Good herb garden companions for a pouch garden include:

- *Boxwood Basil;*
- *Oregano;*
- *Flat Italian Parsley; and*
- *Sweet Basil.*

This grouping, which is an ideal choice for anyone who loves to cook Italian, can also be supplemented with such tomato plants as cherry and grape tomatoes.

(2) Another herb combination that works out well in vertical gardens is:

-
- *Garden Sage;*
 - *Thyme; and*
 - *Sweet Marjoram.*
-

Include collards, turnip greens, and potatoes in you vegetable garden to supplement these herbal plants.



Herbs for a Vertical Garden

Of course, you have an array of herbal plants you can select that can be included in a vertical garden scheme. Therefore, before you decide on some specific plants, look at all the possibilities.

Herbs that are regularly included in a vertical herb garden can include:

- ***Catnip***
- ***Basil;***
- ***Bee Balm;***
- ***Chives;***
- ***Onions;***
- ***Cilantro;***
- ***Citronella;***
- ***Dill;***
- ***Lavender;***

- *Tarragon;*

- *Mint;*

- *Oregano;*

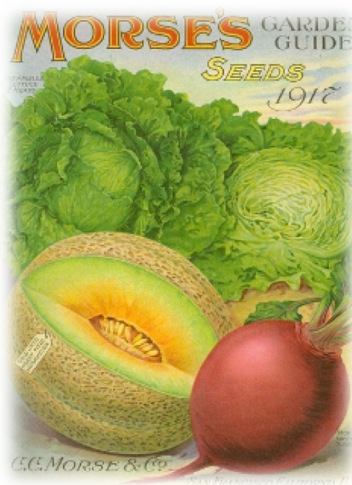
- *Parsley;*

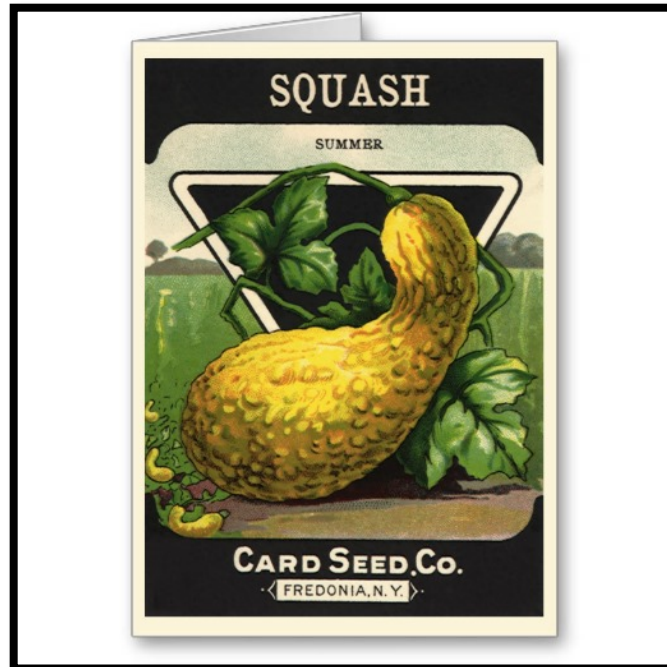
- *Rosemary;*

- *Thyme; and*

- *Sage.*

Use the above checklist to make notes about each of the herbs and for making planting selections.





Planning a Planting Schedule for a Vertical Vegetable Garden

When sowing seeds in your garden, you'll need to refer to the seed packet to obtain the exact planting times. Below are the weeks it takes to grow the plants and the amount of time the plants can be planted *before* or *after* the last frost.

Beans take 8 to 10 weeks to grow and their seeds can be directly sown into the soil about 8 weeks before the last frost of the season.

Beets can be harvested after 10 weeks, and can be sown about 3 weeks after the

last frost.

It takes broccoli 8 to 10 weeks to grow. The plants should be planted about two weeks before the last frost of the season.

Brussels sprouts take about four months to grow and should be planted three weeks before the last frost.

It takes cabbage about 3 1/2 months to grow, with sowing occurring about 3 weeks before the last frost.

Carrots take 8 to 10 weeks to harvest and should be planted a week before the last frost.

Cauliflower, as well, takes 8 to 10 weeks to grow and should be planted a couple weeks before the last frost.

Collards take about a month. They should be planted about 4 weeks before the last frost.

Count on cucumbers growing in about six to 12 weeks. They should be planted about two weeks after the last frost of the season.

Lettuce takes about 7 weeks to grow and should be planted two weeks after the last frost.

Eggplant ordinarily takes about four months to harvest. The plant is generally planted about 3 weeks after the last frost.

Onions grow in about 10 weeks' time. Sow the seeds approximately 3 weeks before the last frost.

Peas grow to maturity in about 10 weeks. Plant them about a month before the last frost. They are cool-season plantings.

Plant peppers about 2 weeks after the last frost. It takes about two months for them to appear.

Potatoes can be harvested in about 15 weeks. Plant them about 3 weeks after the last frost of the season.

Pumpkins take, on average about four months to grow. They should be planted a couple weeks after the last frost.

It takes radishes about a month to mature. Plant them a month before the last

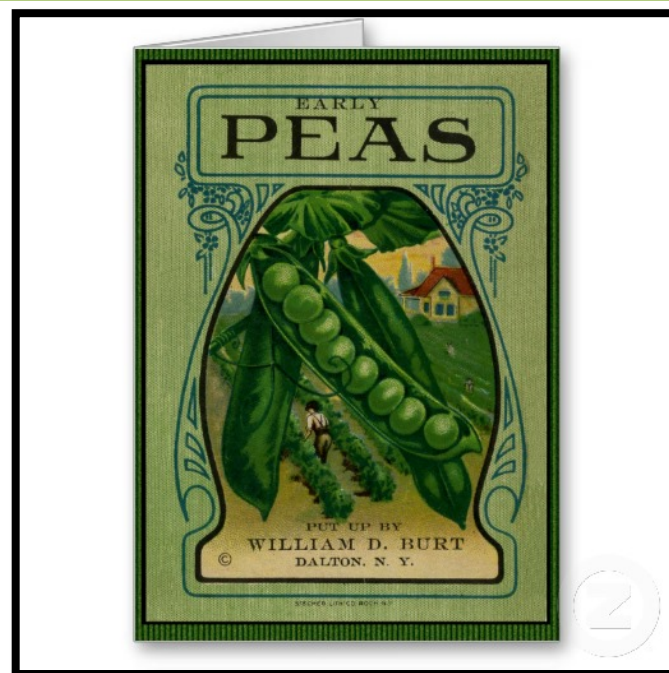
frost.

Spinach grows in about 6 to 7 weeks. Plant the seeds about 6 weeks before the last frost.

Winter squash matures in about 5 months' time. Sow the seeds a couple weeks after the last frost.

Tomatoes generally appear after about three months. The plants should be planted a week after the last frost.

Zucchini can be planted two weeks after the last frost and harvested four weeks thereafter.





Companionable Plants

Naturally, you'll want your plants to get along, especially if they are taking up a small, condensed space. Use the following guide to ensure that the plants you plant are companionable and therefore will thrive and flourish well together in a vertical space.

Asparagus gets along well when planted with parsley, spinach, tomatoes, basil, beets, and lettuce.

If you plant beans, they'll cohabitate amiably with carrots, cabbage, broccoli, celery, cucumbers, eggplant, peas, potatoes, radishes, squash, tomatoes, and

strawberries. Just make sure you keep them away from sunflowers, peppers, onions, and garlic.

Beets pair well with lettuce, onions, cauliflower, broccoli, or asparagus but are foes with pole beans or mustard plants.

Grow broccoli with celery, cucumbers, beans and beets but keep the plant separated from pole beans, lettuce, cauliflower, or cabbage.

Brussels sprouts should not be grown with tomatoes. However, they do get along well with sage, spinach, radishes, dill, or turnips.

Cabbage can be grown with cucumbers, dill, celery, beans, lettuce, kale, thyme, spinach, sage, onions, and potatoes. Just don't try to grow the veggie with tomatoes, strawberries, broccoli, or cauliflower.

Carrots get along well when they're grown with beans, lettuce, onions, peas, radishes, rosemary, sage, or tomatoes. They don't like being paired with parsley or dill.

If you grow cauliflower, then it will flourish when grown with beets, celery, beans,

sage, thyme, or cucumbers. It won't be so happy though if you grow it alongside broccoli, strawberries, cabbage, or tomatoes.

Celery is an amiable plant, getting along well with beans, broccoli, cabbage, cauliflower, leeks, tomatoes, and spinach.

Cucumbers do well when grown with beans, broccoli, cabbage, cauliflower, lettuce, peas, radishes, or sunflowers. Just keep the climbers away from other climbers, such as melons and potatoes, or herbs.

Eggplant thrives when grown with beans, lettuce, basil, peas, potatoes, and spinach.

Kale can be grown with cabbage, dill, potatoes, rosemary, and sage. However, the plant may not fare so well when it is paired with either tomatoes or strawberries.

Lettuce grows well with a variety of veggies, except broccoli. Otherwise, you can pair the leafy green veggie with asparagus, beets, Brussels sprouts, cabbage, carrots, cucumbers, eggplant, onions, peas, potatoes, radishes, spinach, strawberries, sunflowers, or tomatoes.

Melons should not be grown with cucumbers or potatoes. They do get along well when grown with nasturtium flowers, radishes, sunflowers, peas, or tomatoes.

Onions are contrary to beans, sage, or peas. Better to grow them with beets, broccoli, cabbage, carrots, lettuce, peppers, potatoes, spinach, or tomatoes.

Peas like the company of beans, carrots, cucumbers, eggplant, lettuce, melons, potatoes, radishes, spinach, or turnips. They won't thrive all that well when grown with onions or garlic.

If you grow peppers, place them alongside basil, coriander, spinach, onions, or tomatoes. Just keep them away from beans.

Potatoes are best grown with beans, broccoli, cabbage, eggplant, garlic, kale, lettuce, onions, or peas. Keep them away from cucumbers, melons, squash, sunflowers, turnips, or tomatoes.

Spinach grows well with asparagus, Brussels sprouts, cabbage, celery, dill, eggplant, lettuce, onions, peas, peppers, radishes, tomatoes, and strawberries.

Tomatoes, which are one of the best, if not the best plant, to include in a vertical

garden, will grow well when harvested with asparagus, basil, beans, carrots, celery, dill, lettuce, melons, onions, parsley, peppers, radishes, spinach, or thyme. Just don't grow the popular plants alongside broccoli, Brussels sprouts, cabbage, cauliflower, kale, potatoes, or corn.

Finally, corn, which is better sown in a larger vertical garden space, can be grown with such plants as beans, cucumbers, lettuce, melons, peas, potatoes, sunflowers, or squash. Again, just don't grow them in the same space with tomato plants.

Use the above guide for notations when you're deciding on what to incorporate into your vertical gardening theme.

Urban Landscaping: Creating a Living Wall



Pick a Wall – Any Wall

If your goal is to make a living wall, then the following process will give you the basic direction needed to turn a barren canvas into a beautiful, green, thriving landscape. First, you'll need to choose the wall – any wall. Of course, it should receive a good amount of sun. You don't have to worry about the weight of the plants you include either as a wall

generally provides a good amount of support. To enhance the structure, you'll want to build a frame and include plastic sheeting and fabric.

Use PVC Pipe for the Frame

To build the frame, choose piping made of PVC rather than wood or metal. While wood can rot, metal can add extra weight and be expensive.

Apply the Plastic Sheeting

Next, you'll want to affix the plastic sheeting to the frame. This sheeting, in essence, is the frame's backing and will keep water away from the wall. PVC sheeting can serve this purpose well.

Attach the Material for Planting the Plants

After the sheeting has been attached, you'll want to attach the material – a fabric that provides good drainage and will help your plants to thrive. Use any material then that can retain moisture without rotting. Felt padding is a good choice in this case.

Install the Irrigation System

Next, you'll want to install an irrigation system, so the fabric receives adequate moisture.

Make the system out of irrigation fittings that easily lock into place. Select tubing that comes with emitters.

Set up your system so the plants receive a water flow for about 15 seconds, four or five times per day. Attach the emitters along the irrigation tubing about 3 inches apart to prevent overwatering. To deal with any run-off, consider including a flower bed underneath the wall.

Select Your Plants

Now you're ready to select your plants. Of course, like a traditional garden, your choice will hinge on the amount of sun, shade, moisture, wind, and cold that is a regular part of the environment. If you want to keep the wall maintained in the colder months, choose plants that do well in zones that have colder temperatures than where you live. Select phlox, hostas, ferns, or even blueberry bushes in your plantings.

Arrange Your Plantings

In your design, try to choose plants that will grow about three feet from the wall. Plant shade-tolerant plants in the lower section of the canvas and sun-friendly plants in the upper portion of the wall.

Vertical Gardening: A Summation of the Benefits

A Number of Advantages

When it comes to vertical gardening, you can see that there's plenty of reason to grow plants upwardly versus outwardly. Not only is space better utilized, the gardening process takes less time and energy. Using less soil also means less time used for watering plants as well as a savings on your water bill. Plus, when your harvest is available at eye level, picking the food becomes a delight instead of a chore.

Stronger and Healthier Plants

Vertical gardening then is the ideal way for anyone to enjoy growing plants and use them for eating and adornment. Perks come with gardening vertically as you don't have to yank up weeds, air circulation is better, and you don't have as much plant waste.

Because plants grow upward instead of outward, they come into contact less with one another. Therefore, diseases are not as readily transmitted, all which creates plants that are stronger and healthier.

Grow All Kinds of Plants in a Vertical Garden Space

Healthier, stronger plants also result in a larger bounty. Plants simply flourish better in a smaller space. Plus, vertical gardening is not limited to using vining plants but makes ample use of vertically-challenged plants as well. So, you can grow such plants as radishes and lettuce along with melons or grapes.

Vertical Gardens are Supported with a Variety of Space Savers

Wall pockets, stackable containers, and hanging baskets can all be utilized in a vertical gardening space. Aeroponic systems, such as towers, are used for harvesting plants in vertical gardens too. Needless to say, there's really no reason not to garden vertically.

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