

51 Tips for Greenhouse Gardening

Greenhouses can be a very fulfilling investment. This ebook is designed to give you some great ideas about how to start an awesome greenhouse garden.



WHY A GREENHOUSE?

This first set of tips will discuss some of the great reasons to start a greenhouse.

1. Winter Plants

Many people have greenhouses so that they can grow plants to use in the winter. It's easier to grow smaller vegetables for this purpose than bigger ones.

2. Early Start

Having a greenhouse is a great way to get an early start for tender plants seedlings. You can protect these young plants better in a greenhouse, thus having better success.

3. Experiment

Having a greenhouse can be a fun hobby. With a greenhouse, you can experiment with different plants, or to develop new varieties.



LOCATION

This next set of tips will tell you some of the factors that you need to consider when choosing a location for your greenhouse.

4. Sunlight

Your greenhouse should be in a place where it gets maximum sunlight. Sunlight all day is ideal, but morning sunlight on the east is best for plants.

5. Direction

It's a good idea to face the long side of your greenhouse south. There are two reasons for this:

- The angle of the roof is made to catch the maximum amount of the sun's rays.
- If you use shadecloth, you will need to shade only one side, instead of both sides.

6. Trees

Maple and oak trees can shade your greenhouse from the afternoon summer sun. Keep in mind though; these trees should not shade your greenhouse in the morning.

7. Water Source

Your greenhouse will need a reliable water source. Either bring in a whole separate watering system, or have a hose that can reach the entire length of your greenhouse.

8. Drainage

Good drainage is also very important for your greenhouse. If you can, build your greenhouse above the surrounding ground, so rainwater and irrigation water will drain away.



STRUCTURAL TYPES

There are several types of greenhouses. This next set of tips will go over some of the structural options that there are.

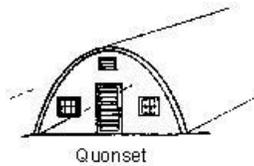
9. Lean To

Lean -to greenhouses usually attach directly to a wall of your home or garage. Here's a picture:



10. Quonset Hut

Quonset hut greenhouses are sometimes referred to as "hoop style." They're domed shaped, inexpensive and easy to heat. Here's a picture:



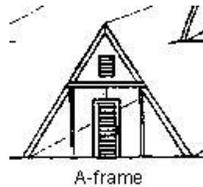
11. Gothic Arch

Gothic Arch greenhouses are a lot like the Quonset style, except that the sides are usually straighter and the curved roof is pointed on top. Here's a picture:



12. Classic A-Frame

Classic A-Frame greenhouses have high, slanted sides. They're a bit harder to heat because of this. Here's a picture:



13. Modified A-Frame

Modified A-Frame greenhouses are different from the classic, because they're built with Gable roofs, which are usually not as steep. Here's a picture:



14. Barn Style

Barn-Style greenhouses, like their name implies, looks like a barn. They have straight walls; therefore make very good use of space. Here's a picture:



15. Even-Span

An even -span greenhouse is a full-size structure that has one end attached to another building. Here's a picture:





SIMPLIFYING

This next set of tips will give you some ideas on some shortcuts that you can do to simplify your greenhouse.

16. Cold Frames

If you don't have much space, cold frames are the way to go. They are small, boxed in gardens, covered with glass or Plexiglas. It's like a miniature greenhouse.

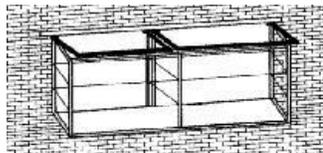
17. Grow Racks

Grow Racks are the next size up from cold frames. They usually come with a cover so that you can modify the air flow, temperature, and humidity. Here's an example:



18. Window Mounted

A window mounted greenhouse is just as it sounds: a miniature greenhouse that's mounted on a window. Here's an example:



19. Portable

Portable greenhouses range from 6 feet to over 50 feet. You can often buy them as greenhouse kits that are easy to assemble and disassemble.

20. Easy Drainage

There are some simple and economical ideas to make sure your greenhouse has good drainage. For example, use any of the following in the bottom of your boxes or pots:

- Cracked walnuts
- Marbles
- Broken clay pots
- Charcoal
- Gravel

21. Easy Trellises

You can make indoor trellises out of coat hangers. Get creative and bend them into different shapes, like stars or hearts, and put them into your pots.



TEMPERATURE BASED

Some people have greenhouses that are based on temperature. This next section will go over these different types.

22. Cool

In a cool greenhouse, the temperatures stay around forty degrees F. These greenhouses are great for seedlings or for storing other plants that don't need a constant high temperature.

23. Warm

In a warm greenhouse, the temperatures are around fifty degrees F. This means that most plants you grow outdoors can survive through the winter in this environment. Many types of houseplants also do well in warm greenhouses.

24. Hot

Hot greenhouses maintain a temperature of 70 degrees F or warmer and are great for growing tropical plants. To have a hot greenhouse, you'll probably need special equipment, such as grow lamps, to maintain their temperature.

25. Solar

Solar greenhouses collect and store solar energy. This keeps your plants warm at night and when the weather is cold and cloudy.

26. Passive Solar

Passive solar greenhouses combine solar energy with other forms of heating to keep your greenhouse warm during the coldest months.

27. Pit

A pit greenhouse is one where you grow your plants at ground level, then dig a walkway underground in order to have access to the plants.



COVERINGS

This next set of tips will discuss some of the options that you have for covering your greenhouse.

28. Glass

Glass was the original covering for greenhouses. It looks great and is easy to maintain. Sometimes tempered glass is frequently used instead because it is two or three times stronger than regular glass.

29. Fiberglass

A fiberglass cover is great because it's strong and lightweight. Make sure it's good quality fiberglass that is clear and transparent.

30. Film Plastic

Film-plastic coverings are made of polyethylene (PE), polyvinyl chloride (PVC), copolymers, and other materials. It's great because it's fairly inexpensive, and lasts between 1 and 3 years.

31. Double Wall Plastic

Double wall plastic covers have two layers of rigid plastic separated by webs. These covers are great because they retain more heat, so you can save up to 30 percent on energy.

32. Floor

The flooring is very important in your greenhouse. It's a good idea to make a walkway made of concrete, gravel, or stone, down the middle of your greenhouse. The area under the plants should be covered by several inches of gravel for drainage of excess water.



OTHER STRUCTURAL TIPS

This next set of tips will give you some more ideas on how to make your greenhouse run smoothly.

33. Heating

You'll need a good heating system in your greenhouse. You can get some heat from the sun, but you'll probably need more than that, especially for a cold winter nights. A good choice is a 220-volt circuit electric heater, as it's clean and efficient.

34. Cooling

Sometimes, especially during the heat of the summer, your greenhouse will need a means to cool down. A good way to do this is with a small evaporative cooler. They cool the air increases humidity in your greenhouse.

35. Soil

The best soil that you can use in your greenhouse is just commercial potting soil found at any garden store. Look for things like perlite, sand, fir bark, peat moss, and vermiculite on the bag.

36. Air Circulation

Circulation of air in your greenhouse is important. It's a good idea to install circulating fans in your greenhouse. Even in the winter when you heat your greenhouse, the fan will circulate that warm air and keep the temperatures uniform.

37. Ventilation

Make sure your greenhouse has proper ventilation. A good way to do this is to use roof vents on the ridge line with side inlet vents. Then, use your fan(s) to circulate the air.

38. Controllers

It can be hard to maintain a successful greenhouse without automatic controllers. The outside weather and temperature can change so quickly, and you'd have to monitor your greenhouse very close without an automated system that controls temperature and moisture.

39. Water Systems

A lot of people hand water their plants by hand. This is great for most greenhouse crops, but you need to be available to water during the day. But many people work during the day, so it's a good idea to get an automatic watering system.

40. Light and CO₂

Carbon dioxide (CO₂) and light are important in your greenhouse. You can buy bottled CO₂, dry ice, and sulfur-free fuels as CO₂ sources.

41. Workspace

Don't forget to make room in your greenhouse for potting plants and working on other projects. If you have limited space, they have potting benches can fold down when you're not in using them.

42. Maintenance

Keep in mind that your greenhouse will have its own maintenance requirements. Be sure to regularly disinfect your greenhouse with diluted bleach, being very careful not to get any on your plants.



WHAT PLANTS NEED

This next set of tips will go over 4 important things that your plants in your greenhouse will need.

43. Nitrogen

Nitrogen is needed for healthy leaf growth. Sources of Nitrogen include:

- Bone Meal
- Activated Sludge.
- Bloodmeal
- Manure
- Cottonseed Meal

44. Potassium

Potassium is used in plants for cell division and strong stems, and helps fight diseases. Sources of Potassium include:

- Manure
- Greensand
- Wood Ashes
- Compost

45. Phosphorus

Phosphorus makes for strong root systems and bright flowers. Sources of Phosphorus include:

- Activated Sludge
- Cottonseed Meal
- Bone Meal
- Bloodmeal
- Rock Phosphate

46. Trace Elements

Other Trace Elements that your plants need include:

- Calcium
- Iron
- Magnesium
- Sulfur
- Zinc

Sources of these include:

- Oyster Shell Flour
- Seaweed
- Compost



GROWING TIPS

This last set of tips will give you some ideas to help your plants grow healthy and strong.

47. Watering

Be sure to water your greenhouse plants with room temperature water, so you don't injure your plants. If you're using tap water, let it stand for a day to get of the chlorine.

48. Herbs

Herbs are great in greenhouses because many of them can repel insects. Herbs also naturally inhibit microorganisms that are good for us.

49. Egg Shells

To give your plants a boost, put some crushed egg shells around them, on the soil. Another tip: dried coffee grounds add acid to the ground.

50. Transplanting

If you transplant young plants, keep in mind that young plants can experience transplant shock. This can set your young plants back considerably. To avoid this, do your transplanting on a sunny afternoon. Keep them covered in your greenhouse, and uncover them a little more each day. Protect them from the cold every night until they gradually adapt.

51. Rinsing

Make sure anything edible from your greenhouse is properly cleaned before you eat them. A great way to do this is to put chicken wire over a bottomless wooden box. As you rinse the vegetables with your garden hose, the dirt and bugs will stay outdoors.