

# DIY GREENHOUSE



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## Introduction

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Greenhouses are gaining in popularity as the prepper movement steamrolls on and more people realize the importance of growing their own food. Unfortunately, Mother Nature does not always play nice and many people don't get a full 120 days of beautiful sunshine and warm weather that many vegetables need to grow properly.



There is also the issue of pests. Pests can destroy a garden in a matter of days. This is why greenhouses are more valuable than ever.

Greenhouses make up for the short growing seasons and offer protection from pests that want to dine on your plants. You can grow plants all year round when you have a greenhouse. Imagine being able to pluck fresh peas and beans from your greenhouse in the middle of winter!

Building a greenhouse is easier than you may think. You can choose different designs and sizes that you would like to build. A greenhouse will give you comfort in knowing that you can grow food for your family. It will provide you with the peace of mind that you need during times of chaos.

You may save more money if you decide to build a small greenhouse. There are supplies and materials that you can use which should be just enough according to your own prepared budget.

If there is enough space that can accommodate a larger greenhouse, do it because you may want to develop more plants and vegetables during long term periods of unrest.

If you really desire to build a greenhouse where you can develop and propagate more plants, you should consider the different factors that would be necessary on the type of greenhouses you would like to build.

Here are some tips and factors you should consider in building your own greenhouse.

## The Basics

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You may consider using salvaged materials if you intend to make a larger greenhouse. You may use these materials in designing and planning for a low cost budget greenhouse. This will also help you minimize the expense of the other supplies and materials needed.

It will also save you time. You should also determine the climate of the place where you live.

You should also determine the climate of the place where you live. An insulated greenhouse should be appropriate for cold climate areas. This will help you provide the needed warmth and heat for your plants. For warm places, a greenhouse that has a shade control would be advisable.

You also need to make sure that your greenhouse will be designed with proper air circulation spaces, ventilation, pest control soil, heaters for winter season, and humidity control devices. You should create an environment that is appropriate for the types of plants that will grow in your greenhouse.

The location of the greenhouse should be built where there is enough sunlight. If you choose a solar greenhouse for vegetables and exotic fruit bearing plants it is best if the greenhouse is situated on the east-west part of where you live because facing it

this way it is more exposed to sunlight. While sunlight is important, it is also important to be sure that your greenhouse is hidden from the view of your neighbors and potential home invaders.

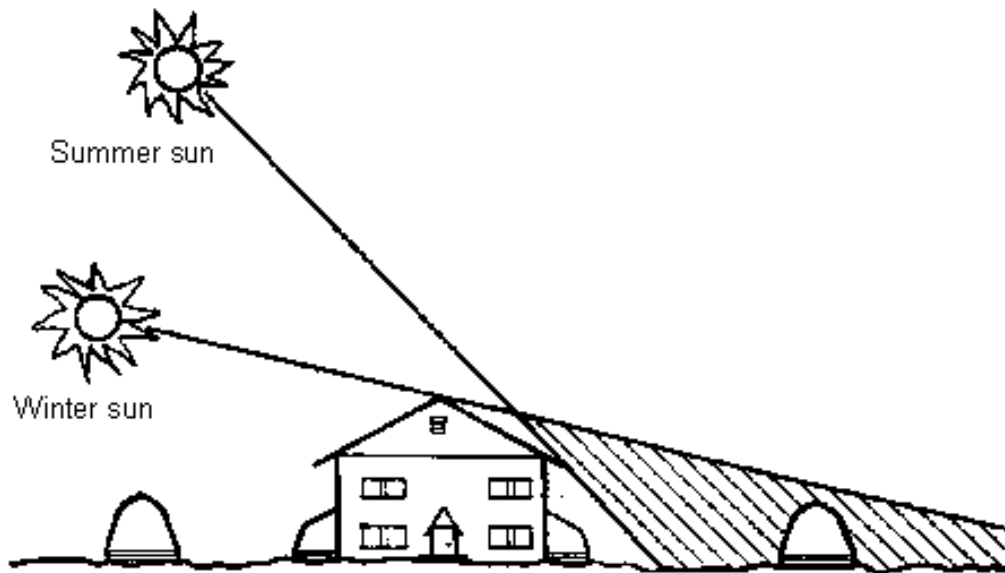


Figure 1. Select location carefully. Note where the shade line occurs in both the winter and summer.

It is also important to consider the covering of the greenhouse. The most advisable shades are the glass made coverings and fiberglass, which might not fit in your budget.

But just know that they provide more durability and they do not deteriorate quickly compared to plastic

coverings. A greenhouse covered with glass or fiberglass allows more humidity and warmth.

You have the option to choose what kind of foundation you would like to use. The foundations can be concrete for a more secured greenhouse.

Others prefer the less expensive lightweight foundation where they use improvised materials such as railroad ties, which they can easily attach to the ground. It all depends on how much you are willing to spend on the structure of the greenhouse.

You may also consider building a greenhouse that will maximize its full potential.

You may want to hidden storage areas and in ground bunkers to store canned food and seeds. Having these hidden storage areas will help make sure that your family has all of the food it needs.



You should use the good bugs or something similar for you pest control chemical. They prevent and control



the spread of the bad bugs in a greenhouse. If you ever find insects in a plant, you should isolate the plant and if possible place the plant outside the greenhouse so that the insects do not house in the other plants.

You should allot a space where you can store fertilizers, potting soil and other tools that are essential in the greenhouse.

You should place a tool rack nearer to the potting place so that it would be easier for you to transfer the soil from the pot of the plants. You should also place buckets and tool holders to accommodate the other equipment when they are not in use.

## Greenhouse Designs and Materials

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The standard design of a greenhouse includes a metal or wood frame that is covered with glass panels. However, glass breaks and metal rusts, which is why the typical construction of a greenhouse has evolved. There are now numerous designs you can choose from when it comes to buying or building your own greenhouse.

Hard plastic or aluminum frames and plastic sheeting are more common these days. The plastic will not rust and it will not be prone to bugs and rot. Aluminum is sturdy, yet lightweight and will not rust.

Plastic sheeting or heavy-duty plastic panels are shatter proof unlike their glass counterparts. They also offer more stability under snow loads. The plastic panels offer UV protection as well. This will protect you while you are working in the greenhouse

as well as your plants that can be harmed by the harsh rays from the sun as well.

What you choose to build your greenhouse with will depend on what you have available and how much you are willing to spend. It will also depend on the area where you live and just how much Mother Nature throws at you.

If you live somewhere the climate is fairly mild and you are not exposed to heavy snow or wild thunderstorms, your greenhouse will not require much fortification. However, if you live in an area where winters are rough and the snow is heavy, you will want to choose a material that will withstand the weight of the snow.

### *Frames and Panels*

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Preppers know the importance of being self-reliant and discovering ways to grow food all year round.

Without a garden, your table is going to be pretty empty. You need a garden for the nutrition the vegetables offer as well.

The frame of your greenhouse is essentially the bones of the structure.

It needs to be sturdy enough to withstand the wind, rain and snow. It also needs to be large enough for you to walk into comfortably and tend your plants.

Once the frame is established, it is time to panel the greenhouse. Clear panels protect the plants, while allowing the sun's rays to flow in and ultimately heat the greenhouse and provide plants with the necessary sunlight.

Acrylic and plastic panels are the most cost-effective and durable options.

## Building the Greenhouse

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Your first step in the construction of the greenhouse is deciding placement, size and construction material. These are all decisions that need to be made before you buy any material.



Come up with a plan first. If you are familiar with growing and are confident in your ability, you can turn your greenhouse into a hobby that pays.

If this is your goal, factor this in when you are deciding how much to spend and how big you are going to make the greenhouse. If you plan on earning money from your greenhouse, a larger

upfront investment is a wise decision—if you can afford it.

## *Placement*

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If you do not want to make a new freestanding structure, you can add it on to the side of your house. This is a very convenient way to access your greenhouse right from a side door.

It is important your greenhouse is high enough to allow you to walk in freely. You don't want to be hunched over while trying to tend your plants.

The greenhouse needs to be placed in an area that gets full sun. However, if you live in an area that is already rather warm, you will want to place your greenhouse near a tree to give it some shade.

Greenhouses do get extremely warm, even in mild temperatures. You don't want to bake your plants. Oak and maple trees are perfect for providing the necessary shade.

Ensure you place the greenhouse on the side of the tree that will only provide partial shade during the late afternoon. You do not want the greenhouse in the shade all day.

If you are going to be utilizing the soil your greenhouse sits on to grow some large plants, like grapes or even corn, you need to make sure you choose a place that has soil with good drainage. You don't want water pooling and becoming muddy on your greenhouse floor.

## *Permits*

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Next, you will want to check with local city and county codes to see if you need to have a

construction permit. This may only be necessary if your greenhouse plans are such that it is big enough to require a permit.

## *Materials*

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Now, you need to determine your budget for your greenhouse. Price out the different materials you will need and decide if you want to use thin plastic sheeting that is purchased in rolls or the heavy plastic panels.

You will need to price the material needed for the frame as well. Keep in mind; the size of your greenhouse will dictate how much you can grow.

You can grow a lot in a fairly small space so don't get carried away and spend money on an overly large greenhouse that you do not fully utilize.



## Step-by-Step Construction

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The materials needed will depend on what you will be using for your construction. In this tutorial, we will be using a canopy frame with rolled plastic sheeting. You can make your own substitutions based on your budget and needs.

### *Materials Needed*

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- Canopy frame 10x20
- 4 to 8 4ft T-posts depending on the size of your canopy frame
- 1 roll of 6mil plastic 20x100ft
- Duct tape
- 3 rolls of heavy duty clear plastic tape
- 20 Squeeze clips
- 18 Ratcheting tie-downs

Once you have materials assembled, it is time to start construction.

1-Put together your canopy frame. Wrap duct tape around each of the joints to provide additional stability.

2-Space out the tie downs every few feet and ratchet one end to the other. Don't make the bindings so tight that the frame bows. You want to provide stability, without breaking or bending.

3-Drive t-posts into the 4 corners of the canopy. If you have opted for a 20-foot frame, place t-posts in the center for added stability.

4-Wrap duct tape around the t-posts where they meet the frame. You want to secure the frame to the t-posts.

5-Cut the plastic into two 30 foot rolls. You will join these two pieces together forming one sheet that will cover the entire frame. Use your clear tape to join the sections together. You will want to have plenty of room to lay the plastic sheets out. This will give you one 38x30 piece to cover your 10x20 frame.

6-Place the sheet over the frame. There will be some overlap, which is fine. You will be securing the plastic and tightening it up.

7-Use the clips to secure the plastic to the frame. If the plastic tears, use the clear tape to cover the holes. This will keep it from tearing further. Do your best to get the plastic somewhat flat. Don't stretch it so tight that it is at risk of tearing.

8-You can use the extra plastic to create doors. Use tape to secure the plastic to the frame.

Your greenhouse is now complete. You can build shelves on the inside, add heat lamps, grow lights and anything else you need to make your greenhouse complete.

You may need to replace the plastic on a yearly basis, depending on how rough the weather has been.

Keep tape on hand to repair any tears in the plastic right away.



## Portable Greenhouses

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While the greenhouse construction mentioned above wouldn't necessarily be portable in its finished form, it is fairly easy to construct the greenhouse once you have gotten the hang of it.

Let's face it, not everyone lives in the same place for their entire lives. You need to have a greenhouse option no matter where you live.

Portable greenhouses are described as those that can be put together in about 30 minutes or less. They are lightweight and easily broken down for easy transport. What's even better, are the kits you can buy that are fairly small and compact.

They can be easily stored in the garage or even in a closet if necessary.

Small portable greenhouses may not be effective for growing several large plants, but they are perfect for starting seeds. This is often all that is needed to get a jumpstart on the growing season. You can start cold-sensitive plants in the greenhouse to protect them from late frosts in the spring and plant them outdoors once the cool weather has passed.

A portable greenhouse is convenient for getting those plants started in the spring and then it can be taken down in the summer to allow the space to be used for other things. This makes the portable variety very desirable for those who have limited space in the backyard.

People who have never used a greenhouse and are not all that familiar with using a greenhouse can get their training with a portable variety. A small greenhouse with just a few plants will help you get the hang of growing inside a greenhouse. Learning the humidity and heat levels and just how hot the

greenhouse will get is a great learning opportunity.



### *Types of Portable Greenhouses*

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As with their full-size counterparts, portable greenhouses come in all shapes and sizes. Choose a portable greenhouse that fits your needs, space and your budget.

You can find small tents that house just a few plants and sit in your window sill or larger varieties that are

essentially a shelf wrapped in plastic. Some can be set up on a deck or patio and require some very basic construction.

### *Using a Portable Greenhouse*

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Your portable greenhouse is the best time to learn about what the weather means to the plants inside your greenhouse. Learn when you need to open the door to provide adequate ventilation for the greenhouse.

On some cold nights, you will need to insulate the greenhouse to protect the plants inside. You can stuff old grocery bags or garbage bags with leaves or crumbled up newspaper and place on and around the greenhouse to act as insulation.

This will help preserve the heat that was conducted and trapped earlier in the day.



If the day is going to be especially warm, consider moving the greenhouse into the shade to keep it from getting too hot. You can also put a space blanket/emergency blanket over the top to deflect the sun's rays.

If you are new to the greenhouse world, a portable option is a great place to start. You will learn how to regulate the temperature inside the greenhouse and just how much light your plants need to grow and thrive. The investment into the portable variety is much less than the larger ones, which is especially nice when you are just starting out.

## Conclusion

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Now you have the information that you need to build your very own greenhouse. This greenhouse will help you and your family survive during disasters and times of civil unrest.

You can develop and grow all sorts of plants in your versatile greenhouse. You can use the seeds in your survival seed bank to grow all of the food that you will need in your very own greenhouse.

Knowing that your family's food needs are taken care of when the crisis hits makes it easier for you to sleep at night.