

# Straw Bale Gardening 101

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Straw bale gardening is another form of container gardening where the container slowly decomposes becoming a rich compost. These types of containers can be located anywhere there is at least 6-8 hours of sunlight and access to a water source. The surface under the straw bale is not of any importance because the plants roots will become established in the straw bale. This is the reason these make great growing containers for paved/concrete areas or areas with extreme soil compaction. You could also use these in areas where there have been soil contaminations but as a precaution it is advised to put down a layer of landscape fabric under the straw bales just in case a few roots would reach the outer edges of the straw bale. You do not want to locate your straw bale garden in an area that does not drain well, this will not affect the straw as much as be a muddy mess that you will have to stand in when tending your garden.

If you have a sloped area you will need to situate the straw bales up and down the slope instead of across the slope, this will prevent your bales from tipping over on you.

## **SPACING**

A minimum of 4 feet should be allowed between your rows of straw bales. You can put the straw bales end to end with the cut side of the bale up (the baling string will be parallel to the planting edge) in the row but allowing for at least 4 feet between the rows will make it easy to get a wheelbarrow or wagon in between rows as well as a wheelchair. Using the straw bale will be at a height that is accessible for individuals that may be in a wheelchair or someone that needs a higher raised bed. You will also want to use a medium that will be easy to maneuver a wheelchair, walker, etc. between the rows. One example would be to use a ¼ inch plywood on top of the ground between your rows, you will need to plan to replace it every few years as it will decompose. Situate your rows to run north to south – this will help to get the maximum amount of sunlight needed provided there are no barriers to block light.



## **SUPPLIES NEEDED**

- Straw Bale
- Fertilizer – you will need approximately 1 pound for each bale you plan to plant. Look for a lawn fertilizer that has at least 20% nitrogen in it – this is the first number listed on the fertilizer bag. Be sure that the fertilizer you choose is NOT a slow release fertilizer



- If you are an organic gardener you will need approximately 3 pounds of an organic fertilizer such as blood meal, feather meal, etc. or any organic fertilizer with at least 5 % nitrogen for each bale.
- Complete fertilizer such as 10-10-10 will also be needed. Example of organic source of phosphorus are bone meal or fish meal and potassium examples would wood ashes or kelp meal.
- “T” posts – 7-8 feet tall
- 2x4’s or 2x6’s to put between the top of the “T” posts
- 14-guage electric fencing wire
- Soaker hose(s)
- Heavy duty garden hose
- Hand trowel
- Landscape fabric (optional)
- Planting mix
- Polyethylene plastic sheeting 2-3 mil and at least 5 feet wide

## CONDITIONING THE BALE

Days in Process	Traditional Fertilizer	Organic Fertilizer	Water
Day 1	½ cup	3 cups	Water to saturation
Day 2	Skip	Skip	Water to saturation
Day 3	½ cup	3 cups	Water to wash in fertilizer
Day 4	Skip	Skip	Water to saturation
Day 5	½ cup	3 cups	Water, warm is best
Day 6	Skip	Skip	Water, warm is best
Day 7	¼ cup	1 ½ cups	Water, warm is best
Day 8	¼ cup	1 ½ cups	Water, warm is best
Day 9	¼ cup	1 ½ cups	Water, warm is best
Day 10	1 cup 10-10-10	3 cups with P and K	Water to wash in fertilizer
Day 11	Skip	Skip	Skip
Day 12	Plant Today	Wait 5 more days	Water any new planting



### Planting the Straw Bale

On day 12 of the conditioning you will want to check the temperature inside the straw bale to make sure it is warmed up, which means that it has started the microbe activity and the decomposition of the straw bale. You can tell this by using a meat thermometer inserted into the bale or if you do not have a thermometer you can stick your hand down into the straw bale and if it is too warm or hot on your hand it will be too hot for plant roots so you will want to water the bale for another day or so to let it cool before planting.

Once the straw bale is the right temperature you can now plant into the straw bale. You will not need any excess potting soil – just use a trowel to push the straw layers apart and insert the transplant into the bale. If you are going to plant seed in the bale you will just need to put a thin layer – about 2-3 inches – of potting soil onto the top of the straw bale, spread your seed or lay your seed tape on the potting soil and then cover with a thin layer of soil and water.



### **WATERING THE STRAW BALE**

Before or after you have planted your straw bale you will want to lay a soaker hose down the bale either in the middle and plant to the sides of the bale or off to the side of your planting. You can secure the hose in place by cutting pieces of heavy gauge wire and bending in a “U” shape to make a pin to secure it in the bale. Water as needed when the bale feels dry.

### **Fertilizing**

Because there is no soil except what the transplant was in, you will need to fertilize your transplants every other week. As the plant grows you will need to increase your fertilizations to every week.

## Common Plants for Straw Bale Gardens

Plants	Tomato	Squash	Cucumbers	Peppers	Zucchini	Lettuce	Beans
How Many Plants per Bale	2-3	2-4	4-6	4	2-3	Follow package directions	Follow package directions

Sources: *Straw Bale Gardens by Joel Karsten, March 2013.*  
*WVU Extension Service*



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