

The *ULTIMATE* Guide To Raised Beds



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Introduction

There is nothing like sitting down to a meal with a salad that you just picked from your own garden. It brings on an indescribable mix of accomplishment, pride and joy. Those feelings are even more enhanced when the food comes from a garden that you have never tilled and have never had to struggle either to plant things in or pull weeds out.

That kind of garden is, of course, a raised bed garden. I have been growing vegetables in raised beds for several years, and thoroughly enjoy it! I want you to fall in love with gardening, too – you will save money on food, eat the most nutritious produce possible, and be more self-sufficient – and one of the best ways to get you to do that is to show you the ropes in getting your raised beds set up.

In this book, you will learn:

- The benefits of growing in raised beds,
- Different shapes and sizes of beds to try,
- What to use as borders around your beds,
- Options for filling a raised bed,
- A few garden planting design options, and
- The most effective irrigation methods for your area.

By the time you finish reading this book, you will have all the information you need to get started on your own raised bed garden, including a list of my favorite gardening websites.

First, I want to make sure you get as excited about raised beds as I am. So, let's move on to the first chapter...

Chapter One: The Benefits of Raised Beds

For some reason, there are still a few gardeners who persist in being skeptical about raised beds. That completely befuddles me, since the production of food in raised beds has been proven time and time again to be superior to that in ground-level beds.

Why is that so? Raised beds bring several advantages to the gardening experience over in-ground beds, for both gardeners and vegetables alike.

1. The soil warms up faster in the spring.

This is a wonderful benefit if you live in a cooler climate; in the Southern United States, where I live, it may actually be a *disadvantage*, at least to a small degree in the spring. Where I live, we experience a mild winter, two to three weeks of spring, and then BAM!, summer is upon us by May 1, with highs often already around 85 degrees (Fahrenheit) or even higher.

Since most tomato varieties and bush and pole beans stop producing at around ninety degrees, growing them in raised beds during the 85-degree days isn't all that helpful. If you live in a similar climate, you can turn this problem into a benefit by doing one of two things.

First, you could start the frost-tender crops that at the same time despise super-hot temperatures as early in the spring as possible. You could get them out as early as mid-March, if you are willing to give them frost protection when necessary. In case the air temperature gets colder than the plants like, the warmer soil in the raised bed will provide additional protection.

Second, you could grow a fall garden instead of a spring/summer garden. In Zone 8, our first frost usually doesn't happen until the third or fourth week of November. And I always still have green tomatoes and peppers on the plants. Thanks to the raised beds, throwing a few sheets over the plants is enough to keep them safe from a thirty-degree night.

Regardless of where you live, this feature of raised beds can also be turned to your advantage...well, with one exception.

There is one kind of place where trying to grow food in raised beds would be an exercise in frustration and perhaps futility as well. That is where the climate is hot and dry most of the year. If you plant in raised beds in Arizona or Nevada, for instance, you will have a hard time keeping the soil moist and will probably break irrigation restrictions – or, watch your garden die of thirst.

In that case, sunken beds are in order. Instead of building the soil up above ground, you dig down two or three feet and add in soil to a level at about a foot below ground level. That way, when it does rain or when you do irrigate, the water will be somewhat trapped and stay in your garden longer.

If you live in such an area, the information in this book will still be a help to you. You simply need to build your beds the opposite direction of a raised bed.

2. No worries about bad soil.

Where I currently live, the soil is mostly clay. Your soil may be very rocky, or mostly sand. Regardless, your backyard soil may not be very amenable to growing vegetables and melons. This is, in fact, the state that most would-be gardeners find their soil in.

There are two ways to remedy this. You can kill the grass in the bed area, go out and buy a bunch of soil amendments, sprinkle them over the area, and till them three inches into the topsoil.

Or, you can build a raised bed. When you build a raised bed, you don't have to worry about how hostile the native soil is to gardening, because you won't be planting in it.

3. No tilling or digging.

As I mentioned above, if you want to plant straight into the existing soil it is not likely to be very easy to work, or friable. Even if you dared to try not tilling in the amendments, just trying to plant seeds or seedlings would be wrist-breaking work. And if the dirt is that hard for you to work, imagine how stressful it would be for a plant to try to grow its roots down to the level where they can take up the valuable minerals the plant needs to grow and produce a good yield of nutritious food.

If you wanted to be able to successfully garden in the existing soil, you would have to either till in amendments or go through the back-breaking double-dig method to give the soil any amount of friability. And even then, it would not be nearly as easy to work as the soil in a raised bed.

Building a raised bed saves you a lot of upfront investment in time and effort, and makes the whole gardening process a lot more enjoyable than it would be otherwise.

4. Weeding and planting are easy.

In Chapter Five, I'm going to tell you the best options for filling a raised bed in order to end up with the healthiest growing soil possible. Whichever of those options you choose, you will end up with the loosest, richest and most friable soil possible. Not only will this translate into healthier plants, but also less work for you.

I don't bother taking a trowel with me when I go out to plant seedlings. Scooping a couple handfuls of dirt and mulch out of the spot where I want to plant is like child's play. It makes transplanting an enjoyable task, unlike for traditional gardeners who have to exert such force to dig a hole that they can count it as their daily workout.

One of my childhood memories is of my mother whacking weeds with a hoe halfway through the growing season. It didn't leave a terrifically positive impression about gardening on my young brain. But with raised beds, you don't have to own a hoe. When a weed pops up, and you reach into the bed to pull it out, it slides out like butter off a hot knife.

In addition, because raised beds lend themselves to more intensive planting – more on that in the next benefit – weeds are few and far between simply because there is little room or light for them.

5. You can grow more in less space.

Because the soil is loose and fertile in a raised bed, you can plant crops closer together than in the traditional row method and expect just as much – if not more – yield. That is really good news for the urban gardener who is short on space, because you can grow two to three times as much food in raised beds as you can with the row method in the same area.

As I mentioned above, planting intensively has the additional advantage of keeping out weeds. Whatever little space might be left for a weed seed to germinate in, it will probably not have enough light to grow, especially once your crops are half-grown and larger.

6. Healthier plants.

If you tend to your raised bed garden well, you will end up with healthier plants than with a traditional in-ground row garden. One of the main reasons is that you do not walk on the soil of a raised bed, and so do not compact it.

Another memory I have of my parents' garden is being assigned to take the trowel out and dig up crabgrass (I whined about being bored one time too many). Not knowing any better, my parents grew their crops in rows, and the soil in between the rows was compacted, and that crabgrass was an absolute bear to pull out.

Compacted soil not only makes weeding harder, but also negatively impacts the roots of the crops. While some crops, such as greens, don't mind compact soil, others, like root crops and tropical plants such as bell peppers, don't grow as well under such conditions.

If you had any doubts as to whether using raised beds for growing your food was the best choice, they should be gone. Now comes the fun part: the many kinds of raised beds.

Chapter Two: Shaping Your Bed: The Sky's The Limit

Quick, what's the first thing that pops into your mind when you hear the phrase "raised beds" (I mean, besides a mattress slung over the rafters of an open ceiling)? The typical image is a wooden box in the shape of a square, and for good reason.

A four-square-foot box is the most popular kind of raised bed, made famous by Mel Bartholomew in his book *Square Foot Gardening*. It is also a practical choice for most backyards and is easy to work with.

But not all spaces lend themselves to a series of square foot beds. And besides, you may want to get a little more creative than that, especially if you want to be sneaky and garden in your suburban front yard without having neighbors blow the whistle on you. So in this chapter, I present five kinds of raised beds to help you think – a-hem – outside of the (square wooden) box.

Super-high beds

Any garden bed that is more than two feet high is what I call “super-high”. It is often built that way for looks, especially as part of front-yard landscaping. The photo below is of a super-high raised bed we built in front of our house in north Texas. We were both tired of pruning the three rows of hedges the previous owners had planted in that area and so had already taken them out. Then, after changing the beds in the backyard, we ended up with a bunch of leftover landscape edging bricks.

I was looking for more room to grow lettuce, and since that particular area gets just enough sun in the spring and fall, when we can grow lettuce in that climate, I decided I wanted to build a raised bed there. My artistic husband designed and built a bed to conform to the existing landscaping boundary, meticulously arranging the bricks in the pattern you see in the photo.

Since I was only planning to grow greens there, and we had enough bricks, I had him fill the middle of the bed with bricks as well, leaving just enough room at the top to pour in six inches of potting mix. Since lettuce roots grow shallow, that was plenty deep.

When we later decided to dig out all the grass on that side of the front lawn and put in a mix of perennial herbs and landscaping plants, that super-high bed made a great accent in the back, from the sidewalk view.





My husband stacked the bricks freehand, but many people build such beds with mortar in between the rows of brick. The following photo is not a vegetable garden, but the same technique used in non-edible landscaping can be used for raised beds to make them more attractive.



Of course, this is not the only way to build super-high raised beds. They can have walls of wood, too. Some are even wooden square boxes on legs to make them table height. Such beds are specifically made for ease of work, most often used by elderly or disabled people who cannot bend or squat down to a six- or twelve-inch high raised bed. The problem with these is that you can only make them so deep – usually six inches – and therefore are very limited as to what you can grow.

The two major advantages, then, of super-high raised beds are their attractive looks and ease of working in them. The major disadvantage is cost. The bricks making up our suburban raised bed, for example, cost well over \$100. To have put mortar in between would add to the cost. Building such beds out of wood would not be inexpensive, either, as you would have to select rot-resistant boards, which can add up more quickly than you might think.

Nevertheless, if you can afford the initial outlay, such a bed will be pleasing to work with for years to come. And if you want a super-high bed without the typical cost, I show you how to build one in Chapter Five.

Terraced beds

Terraced beds combine regular low raised beds, with a six- to twelve-inch height, with a medium-high and/or super-high raised beds. Terracing raised beds is usually done for looks more than anything else, as they make for a spectacular focal point for either a front yard or a backyard.

However, building terraced raised beds – or buying them, since this kind of setup is commercially available – can be practical, as well. For example, an urban gardener, not wanting to ever deal with grass sneaking into garden beds, may choose to tear out an entire lawn and replace it with gravel and stepping stones – or even solid concrete.

But now, growing peppers, tomatoes, okra and other tall crops will be problematic. Whereas lettuce and dark, leafy greens can grow just fine in soil that is six to twelve inches deep, the taller plants grow much longer taproots, and will be much healthier and more productive if they have at least three feet of depth of soil to grow into.

In such a case, the gardener (Terry, for the sake of using a gender-neutral name) can build a twelve-inch high wooden box for growing greens and low-growing herbs. Behind that, Terry can build a two-foot high box for such plants as basil, bush beans, and root crops. Behind the two-foot box, Terry can build a four-foot high raised bed for tomatoes, peppers, cucumbers, corn, and the like.

Of course, unlike with our suburban super-high bed, Terry will have to fill the entire depth with soil in order for the plants' roots to have the depth they need. Again, this can be a costly initial outlay, but if it makes more sense than gardening in individual containers – and in my experience, containers are too confining for a plant to grow to its full potential, and incur their own costs with more intensive fertilizing and having to replace the soil every year – and using the existing ground isn't desirable, this is a good option to consider.

Terracing is actually a great option if you own and live in a condominium or townhouse, have a sunny patio, and plan to live there for a while. It's the perfect option for front-yard gardening if you have the misfortune to live in a city or HOA-ruled neighborhood where front yards are expected to have a certain level of sophistication in their appearance.

Keyhole beds

Keyhole beds are another great solution for people who want to grow edible landscaping in their front yard, but must be careful about how it looks. They are also great for people with postage-stamp sized yards, because since they are round, you can fit a few more plants in them than you can in a rectangular bed with the same area. Keyhole beds can be built as low or as high as you want or need; their uniqueness is in the shape.

Here is how you construct such a bed. First, put a stake in the ground in the center of the area you want to turn into a garden bed. Attach a five- or six-foot long string to the stake, depending on whether you want a ten- or twelve-foot diameter bed. Walk slowly around the stake at the end of the string, marking every foot or so with a stone or stick to indicate the perimeter of the bed.

Wherever you want the entrance of the bed to be, create a stone path eighteen to twenty-four inches wide that extends to the center of the bed. From this path you will be able to reach all but perhaps the outermost plants.

Prepare the inside of the bed using one of the options coming up in Chapters Four and Five. Basically, get rid of the grass and fill the bed with organic material after choosing and building a border both around the outside of the bed and along the edge of the path.

I will get into detail on the design and spacing of plants for a keyhole bed in Chapter Seven. For now, suffice it to say that the beauty of a keyhole bed is that the shortest plants go along the path, with the taller plants behind, so everything is within easy reach.

The photos below show a keyhole bed in progress. Obviously, you would kill the grass first but I assembled this part of a bed specifically to give you an illustration in this book.



Figure 1 String tied to stake to mark perimeter of bed.



Figure 2 Marking off perimeter with found objects.



Figure 3 10-foot diameter bed, with half-finished path and partly-finished border.

Straw bales

Straw bale gardens are being made more widely known thanks to an urban gardener in the suburbs of Minneapolis, Minnesota, Joel Karsten. I'm not sure if he actually invented this raised bed technique, but whoever did, my proverbial hat off to you! It is an ingenious idea.

Straw bales are inexpensive, and provide an immediate super-high raised bed with no construction whatsoever. The only disadvantage is that new straw bales need to be bought every year, but even then you may be able to garden for several years before you even approach the cost of building a super-high raised bed garden...and it's a lot more natural – and cheaper – way to keep grass out of your garden than pouring concrete over your lawn!

So, how does a straw bale raised bed work? Simple. You begin the decomposition process in the straw bale, and within two weeks you have wonderfully rich organic material to plant in.

That's right: you plant your seeds and seedlings directly into the straw bale.

To prepare the bales for planting, for the first six days you alternate evenly watering into each bale ½ cup of nitrogen-rich fertilizer, with watering the bales without fertilizer. Day one you water the bales with fertilizer, day two without, and so on. Every day, you water so that each bale becomes saturated, with water running out the bottom of the bale.

Days seven through nine you follow the same pattern but reduce the fertilizer to ¼ cup. Day ten you put one full cup of general garden fertilizer in each bale, and saturate them one more time. Two or three days later, the bales are ready for planting.

Another cool feature of a straw bale bed is that you can grow small plants, such as lettuce, spinach and strawberries, from the sides of the beds. You can therefore double your growing space without using any more of your yard!

On his website, <http://strawbalegardens.com>, Joel Karsten has a schedule of classes where he teaches this gardening method in different cities across Minnesota and Wisconsin. If you don't live anywhere near either of those two states, you can buy his e-book which details exactly how to set up, plant in and maintain a straw bale garden.

Herb spirals

Herb spirals are a unique kind of raised bed that is wildly popular among the Permaculture community because it saves space and water, and creates several micro-climates in one small structure. The spirals allow you to grow a lot of herbs – and a wide variety of herbs with different light and water requirements – in a relatively small area.

So, how do you build one? Mound up a three-foot high, five-foot diameter pile of soil. Place rocks about the size of a baseball to a basketball – the largest ones at the bottom – in a spiral pattern, starting at the bottom and winding toward the top. There should be about a foot of soil between each tier.

Plant herbs that appreciate sun and are drought tolerant, such as oregano, rosemary and thyme, on the south side near the top. Parsley and chives like less sun and cooler temperatures, so plant them on the north side. Water-loving herbs, like mint, should be at the bottom, since you will begin the watering at the top of the spiral and let it flow down.

For some great drawings and links to instructional videos on building an herbal spiral, feel free to visit <http://www.phoenixpermaculture.org/profiles/blogs/how-to-build-an-herb-spiral>.

While the name of this gardening technique implies that it is for herbs, I say, why not try it with common vegetable crops? Have one broccoli, one Swiss chard, three kale, or one okra at the very top, as they are relatively drought-tolerant. Further down, plant bush beans, a few carrots and a dwarf bell pepper plant. At the very bottom, plant lettuce, since it is one of the thirstiest vegetable garden crops.

Whatever you decide to plant in an herb spiral, it makes for a beautiful front garden landscaping piece, or a peaceful – and aromatic – focal point for a backyard vegetable garden.

The point of this chapter is, you can create raised beds from any shape and at whatever height you like. I will close with two pieces of advice:

1. Should you choose – or need – to build rectangular beds longer than four feet, keep them three feet wide and make sure you can access them from both sides.
2. Whatever shape bed you build, make sure you have at least two feet of walking space between beds.

Now that you have some ideas on the kinds of raised beds you could build, what are some good materials and techniques to use as borders?