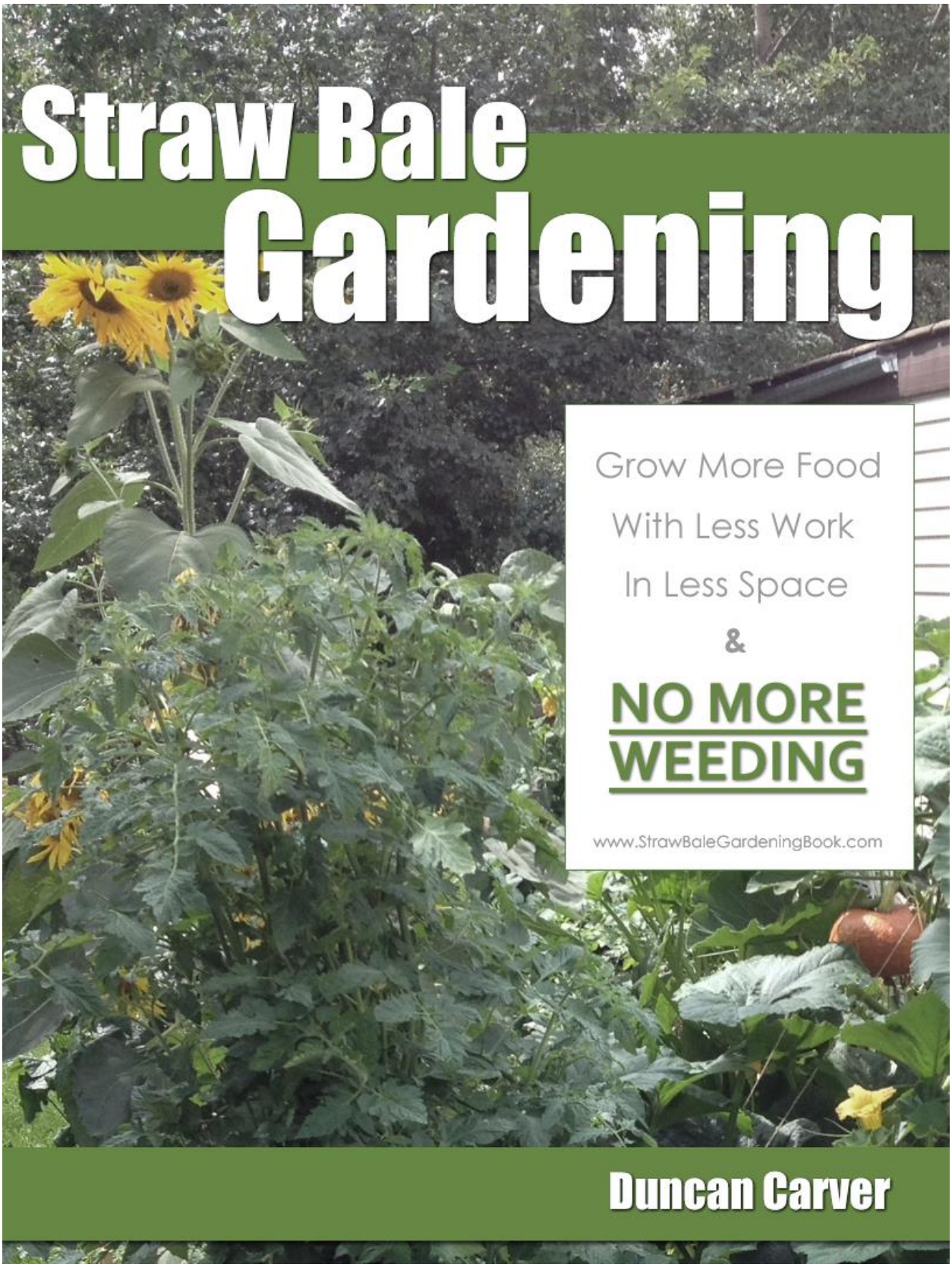

Straw Bale
Gardening
Grow More Food
With Less Work
In Less Space
&
NO MORE
WEEDING
www.StrawBaleGardeningBook.com
Duncan Carver

Copyright & Disclaimer

Please note that much of this publication is based on personal experience and anecdotal evidence.

Although the author and publisher have made every reasonable attempt to achieve complete accuracy of the content in this book, they assume no responsibility for errors or omissions. Also, you should use this information as you see fit, and at your own risk. Your particular situation may not be exactly suited to the examples illustrated here; in fact, it's likely that they won't be the same, and you should adjust your use of the information and recommendations accordingly.

Any trademarks, service marks, product names or named features are assumed to be the property of their respective owners, and are used only for reference. There is no implied endorsement if we use one of these terms.

Finally, please use your common sense. Nothing in this book is intended to replace common sense, legal, medical or other professional advice, and is simply meant to inform and entertain the reader based on the author's personal experiences.

Contents

Introduction

A very warm welcome to your new straw bale gardening adventure.

I know you're going to find it extremely exciting, practical, and one of the easiest techniques that you can use to grow your own organic food at home.

I've been gardening for a long time now (exploring numerous different techniques), but I was first introduced to the idea of growing in straw bales by my father.

You see my dad and I have a "friendly" growing competition each year to see who can grow the best crops in our small gardens.

It's usually self-judged and based on Tomato quality & yield, and so as you might imagine, there often tends to be two winners ;-0 Anyway…

One season he went down the local farm supply store, brought a couple of straw bales, dumped them on the lawn, and threw some vegetable seedlings in the top of them.

Now obviously there was a bit more to it than that (as you'll soon discover), but at the time I didn't really know what he was up too.

I really thought he was dreaming if he was going to grow anything in those straw bales.

But boy was I wrong.

Everything he had planted really took off – even better than what we had planted and growing in the traditional garden beds that were running alongside them.

There were a couple of zucchini, a few basil plants, an eggplant, a tomato plant and some other things too. There was a real variety – essentially the left over seedlings that we couldn't fit in the traditional garden beds.

And after a few months, it was pretty obvious that this was the way to grow…

Standing there, dripping with sweat in the hot sun, catching my breath, having just worked over one of the traditional beds – staring at the straw bales – it became clear what the easiest, most sensible, least labor intensive, and overall "cleaner" gardening technique was.

It was without a doubt the "off the cuff" attempt at using straw bales.

Just doing the numbers, it was taking an hour or two each week to manage the traditional beds (weeding and such), and yet only a couple of minutes to check over the straw bales and pull the odd weed out here & there (and there weren't many of those at all either).

It meant we could spend a lot more time, sitting by them straw bales, having a cold beer in the sun, with me explaining to Dad how much better MY Tomatoes looked back in MY own garden (of course they did) ;-0

Anyway, I was soon sold on the idea of growing in straw bales.

If you're like me, I'm sure you like keeping things easy.

Well growing in straw bales will allow you to achieve the exact same end goal of growing your own healthy food but it will mean you can spend a lot less time, effort and energy to do so.

And that just makes sense.

I'm sure after reading this book, and giving it ago yourself, you will be sold on it as well.

It really is an awesome, low maintenance, productive way to grow more food.

Here's wishing you all the best with your gardening adventures…

Duncan Carver

Duncan Carver

admin@strawbalegardeningbook.com

http://www.StrawBaleGardeningBook.com

History

If you've ever researched straw bale gardening online, you would've discovered just how popular it's become, and how extremely enthusiast a lot of people are about using it as an alternative (or supplementary) growing method.

Given the "vibe" - one might even think that growing vegetables & plants in straw bales is a recent phenomenon. However in reality it's been used as a successful growing technique since ancient times and it's only recently become more "main stream".

Ancient Egyptians were highly efficient at growing & producing wheat (amongst many other crops), and had very extensive agriculture & irrigation practices, and it's believed that's where the method had its initial origins.

References to straw bale gardens have also been found in the history, art & writings of the ancient Aztec people, who used straw bales as a way to help mitigate issues with growing crops using more traditional means in an extremely wet climate.

It was also reasonably common in United States in the 40's and 50's, when people were more reliant on producing their own food & just more self-sufficient in general.

They also say that when Israel was first established in 1949 (in such an arid place and with no established agricultural industry to support the rapid influx of new population), they turned to using straw bales as a means to substitute for the lack of decent land available for more immediate food production.

In more recent years, and with the help of the Internet's ability to really help connect people with similar interests (and share and expand the knowledge pool), it's once again become an extremely popular method of growing for both hobby & professional gardeners alike.

In fact, given its definitive advantages over a setting up and managing a more traditional garden bed, that popularity is only like to continue to grow.

You'll now find hundreds of websites out there, with countless bloggers writing about the technique, and garden forum community members discussing it - all more than willing to share their personal experiences, knowledge, help and expertise.

And that's always a great thing – especially when it comes to encouraging more people to grow their own food and to not be so dependent on others.

Straw Bale Garden Benefits

If you're like me, I like to keep things as easy as possible.

And whilst I personally don't mind traditional gardening techniques (sometimes mucking into the earth and getting some good exercise & a decent sweat on is good for the soul), often it's just not an option for many people, for any number of reasons.

Especially if you have little space available or a just too busy with "life" in general.

And although I might be a little bias, when you compare setting up and managing a straw bale garden with a traditional garden bed, the benefits & advantages become immediately obvious and are many.

And this is why it's become such a popular growing method…

Grow Anywhere

A straw bale gives you all of the benefits (and flexibility) of container gardening, without the need for actual containers (unless you choose to place your straw bale inside one) and without the need for soil.

The straw bales themselves are the containers and the entire container is "growable" space.

In fact, they're actually "self-composting as you grow" containers too.

It gives you the advantage of being able to grow wherever you have available space or wherever you desire, given your individual circumstances.

Whether that's on concrete, pavers, your patio, your deck or the lawn – you can literally place a straw bale garden somewhere and start growing something.

That also means if you're one of those people obsessed with your lawn, don't worry, you can keep showing that off too ;-0

You Can Place A Straw Bale Garden Anywhere – Even On A Concrete Driveway

Save Money On Compost

Because the straw bales themselves are the containers – it means you don't have to spend money on buying, building or acquiring multiple containers to grow your produce in.

And whilst you still might have to spend money on getting your straw bales (usually as little as $5 per bale), they're a heck of a lot cheaper than fancy containers.

That investment is also directly returned in the form of excellent, nutrient rich compost for your next growing season.

Let's face it - you're not exactly going to be able to compost a rusty old bucket and turn it into something useful at the end of its life ;-0

More Growing Space

I'm a massive fan of the concept of vertical growing.

It saves space AND allows you to grow a whole heap more, and it makes growing food accessible even to those with the most limited space. So it just makes sense.

There are many systems that can achieve this, everything from homemade or store brought PVC piping setups, to more natural bamboo pole alternatives, to vertically engineered and specifically designed (and often expensive) container systems.

Planting Up The Sides Of Your Bale For More Growing Space

And whilst straw bales might not give you as much vertical growing space as some of those purposely designed systems, they certainly give you more space than a traditional garden.

Think about the amount of space a straw bale takes up on the ground.

We'll that space it's taking up, in a traditional bed, that's all of the planting space you've got.

Now picture in your mind unfolding a straw bale like you might a cardboard box.

You unfold both the longer vertical sides, and the vertical ends.

Imagine laying that out flat like a box, and you'll see you've at least doubled (almost tripled) the available growing area simply by utilizing the sides and walls of the bale.

So depending on how you design & position the layout of the straw bales for your garden, you really can create a lot more growing space available for whatever you like.

If you want to beautify your straw bale garden (and attract more bees), you could plant attractive flowers here (edible flowers too if you like). The vertical space is also ideal for most herbs, and you can even train strawberry runners to grow along the sides as well.

That means you can use the top of the bales for vegetables that require more growing space, and not waste that "prime growing" real estate on smaller plants that will quite happily grow and more importantly thrive in the sides of the bales.

More Comfortable Gardening

Although the dimensions of a straw bale can vary, most are roughly 2 feet (600mm) in height.

So this not only gives us the benefit of more vertical growing space, but it means we're "working" at a much more comfortable height.

This is an ideal situation for anyone with back problems or other aliments (or anyone that just wants to garden more comfortably for that matter).

It stops us from having to continually get down on our knees and hunch around at ground level when planting, pruning, or weeding, or just doing general maintenance.

Realistically, with a straw bale garden you could do all of that sitting in the comfort of a chair if you liked ;-0

And this more comfortable gardening method is as equally true for both planting our seedlings and managing and harvesting crops at that level, or even managing and harvesting crops at

standing height (depending on what you're growing in any particular bale).

Now I'm no old man – at least not yet anyway - but if we can make things easier & more comfortable for ourselves (and others), then it just makes sense to do so.

Most Plants Can Be Comfortably Managed At Standing Height

Little To No Weeding Required

Now I've yet to meet a gardener that actually enjoys weeding.

Once you've got any garden established, it's the single biggest maintenance task that needs to be done on a continual basis, if you want to keep things manageable.

So this could potentially be one of the biggest time saving benefits of setting up a straw bale garden. And that is there is going to be very little to no weeding required.

This is simply because it's difficult for weeds to become established.

Weeds can be introduced into soil by any number of means, from bird droppings, blowing on the wind, carried in on your shoes, you name it.

And once established they can easily get out of control without regular attention.

They can also turn into a REAL nightmare for subsequent growing seasons if they go to seed too.

But unlike traditional soil, straw bales just aren't a decent medium for most weeds to get started during the season.

And any weed seeds that might have been in the bales in the first place, will often get killed off during the hot composting stages of the initial conditioning process.

Now you might find the odd wheat, oat, or grass seed that manages to escape this process and will germinate and sprout very early on, but they're very easy to tweak out.

Some Initial Wheat Seeds Might Sprout But Can Easily Be Tweaked Out

Simply pinch them right out from the base of the sprout and you'll be able to pull out the entire sprout, roots and all. From then on in you're talking minutes to weed a single bale over the rest of

the growing season.

Eliminate Pests, Disease & Crop Rotation

Traditional garden beds are generally fixed in the same location year after year.

That's especially true for the backyard gardener, as it's entirely dictated by the limited amount of space & location options you've got to work with.

And one of the major problems of growing vegetables in the same place year after year is that once soil borne pests & diseases are introduced into the soil, they become extremely hard to get rid of.

This can have a very detrimental impact on the health of your plants, their productivity and yield (and not to mention your gardening happiness too) as you might image.

Who really needs year on year problems if we can eliminate them almost entirely?

The most common means to try and reduce this problem with traditional garden beds (and also because you have to continue to "work" to improve your soil in general) is by having a crop rotation schedule.

That basically means you don't want to grow the same thing, in the same place, season after season.

For example, a common rotation schedule is to have three different growing beds; the first would contain your Legumes (Beans & Peas), the following season you would plant those in the second bed, the following season you would move those to your third garden bed and so on.

Some people also introduce a fourth garden bed into the cycle too, which is simply left to rest completely for a season – which is a good idea to give the soil a break and a chance to recover, but, it's wasted space.

One of the reasons for this rotation is that any plant specific (in this example Bean or Pea) soil borne diseases, that may have introduced themselves into a specific growing bed in any given season, won't (one hopes) exist in the soil of the other bed the next.

And of course the same applies to the other varieties of vegetables you're growing in your other beds and also rotating on the same cycle too.

But this is ultimately "best of our ability" mitigation control.

Growing in straw bales eliminate all of these problems almost entirely.

Straw bales are generally only used for one growing season (potentially two at the most

depending on their condition) so it eliminates the potential for soil borne diseases to really take hold – especially because you're not using soil ;-0

Not to mention it can also interrupt the lifecycle of any insect pests that might have decided to make your straw bales their home too.

Once the growing season is over you can "hot compost" your old straw bales – a process which effectively kills any of these diseases & pests that by chance might exist, and the new compost can then be safely applied and introduced into your following seasons straw bale operation (or used in any other means you would use compost would too).

No Digging, Tilling, Or Soil Preparation

Another awesome benefit of a straw bale garden is the fact that you're eliminating soil from the gardening equation. So unlike a traditional garden bed, one that you have to dig over, till and continue rework the soil season after season, that's just not required.

I've already mentioned why that virtually eliminates soil borne diseases and pests, but it also saves a ton of hard work as you would imagine. So you don't need to get the old shovel, rake or hoe out and break your back – or use any clunky machinery to do the same thing.

That can get old really quick ;-0

This is also fantastic news if you live in an area with really poor, hard or rocky soil (or none at all if you don't have a lawn or garden) – it's no longer an issue or excuse not to get growing. So long as you have some available space, you're good to get growing in a bale.

Instead of soil we're planting directly in the straw bales, and only introducing a bit of compost, nutrient rich material, and optionally a bit of potting mix if and where required (depending on what we're planting and are looking to achieve).

In fact, as we're growing in straw bales, we're actually kicking off the process of making new perfectly conditioned soil ourselves – as the straw bales break down and self-compost.

A growing medium filled with billions of beneficial microbes & bacteria that will enable your plants to thrive. One that as soon as the growing seasons over, we can compost to completion, and introduce that compost into any other traditional soil to help recondition it as well.

How cool is that?

Regulates Temperature & Extends Growing

Just like a regular compost bin or pile - because our straw bales are slowly decomposing and self-composting from the inside, a certain amount of heat is continually being produced as a by-product of that process.

Once well-conditioned, this keeps the internal temperature of the bales regulated and ideal for the root systems of your plants (not to mention perfect for the billions of beneficial microbes, bacteria and other critters inside the new eco-system you're creating).

It also helps to fend off and mitigate the impact of minor frosts and protects against sudden unforeseen cold snaps. This is the same principal behind sprouting seedlings on seed mats that have internal elements – to give them the best start possible.

In turn, due to this internal self-producing, self-regulating heating system, it also allows you to start planting sooner and extend your growing season a little longer – in fact, it can actually add a couple of weeks of growing at both ends of the season.

Good Moisture Retention & Drainage Properties

Straw has really good moisture retention & drainage properties.

The "straw" itself is the steam (or stalk) of the wheat (or oat, or rye) plant with all leaves, flowers and grain removed. It's what's left over once the wheat is harvest from the field.

It is also hollow, like well, a drinking straw.

When watered, this allows the moisture to be absorbed inside the stalk itself, and travel around inside it to go where it's needed – to the root systems of the plants. And in the same token, given the nature of how a straw bale is held together, it has excellent drainage properties too.

As you might expect, just like a regular garden, the level of water retained in a straw bale is largely related to the external temperatures. On hotter drier days more water is going to be required and used by the plants you're growing (and will disappear through evaporation).

Watering is something you will want to pay good consideration too, but when properly watered and managed, it means you'll be able to cut back on the overall amount of water used. We'll soon look at the various ways of achieving a decent watering management system.

Flexibility To Scale

Don't have much space? You've got heaps?

Another great aspect of using straw bales as your growing medium is that you have flexibility of scaling. You can setup just one, or multiple straw bales, limited only by the amount of space you have available and what it is you are looking to achieve.

You might like to just setup one or two, to run alongside your traditional garden beds, have one or two operating on your patio just for growing your herbs, or you might even like to drop the traditional garden beds altogether and get into 100% straw bale food production mode.

In fact there are many smaller commercial operations that have done just that.

So again, the flexibility to scale is really nice. It allows us to do whatever we like and create an awesomely productive garden limited only by our imaginations.

Scale Up The Size Your Straw Bale Garden As Much As Space & Desire Permits

Acquiring Your Straw Bales

The great thing about using straw bales as your garden container AND growing medium is that they're very easy to source - even if you're living in the city or suburbs, and they're cheap too.

Plus the money you'll spend on acquiring them will be returned in the form of time saved, and rich valuable compost at the end of your growing season which you can then use in the future.

However there are a few things to keep in mind…

Straw Varieties & Hay…

First and foremost, straw comes in many different varieties.

The most common is wheat as it's one of the most popularly grown (useful and practical) farmer's crops. But you might also find rye, barely, or oat straw available if that's also a crop that's commonly grown in your local area.

What we are looking for is straw from "cereal" plants like these – and if you can acquire wheat straw, then just run with that as it's what is used by the vast majority of straw bale gardeners.

One of the biggest "rookie" mistakes that people often make (and you will only make this once) is that they purchase HAY bales rather than STRAW bales.

Now you can actually grow plants in hay, but if one of your goals is to eliminate weeding from your gardening practices (and I'm sure it is), then it's definitely NOT recommended.

I would suggest you stay well away from it.

Here's why…

Hay bales are used as a food source for farm animals. Hay is harvested when the wheat plants are alive and full of grain & seed. This can be a massive problem as those seeds (along with those of other plants & weeds the baler might have picked up when harvesting & making the bale too) will be riddled throughout the hay bale.

And obviously, a lot of these are likely to sprout right throughout the bale.

Straw Bales Nicely Supported With Garden Twine For Extra Support

Straw on the other hand is the left over "stalk" of the wheat plant after harvesting the "hay".

The stalk is left to die and dry out in the field before it is then also harvested separately and turned into straw bales.

As such, it doesn't have the same problem of being full of seeds from the living plant.

Straw is used as bedding & flooring material for farm animals (rather than food).

So, unless you're looking to become a backyard wheat farmer this season, be sure to stick with straw bales, as one reader found out the hard way…

"...be sure you get STRAW bales which are weed free and not HAY bales which are full of weeds! My daughter made that mistake several years ago. We are still trying to get rid of the Spanish needles & are further behind than when we started!" ~ D. Smythe

Where To Source Your Bales…

There are many places where can you source your straw bales from.

If you live close to a rural area you can go direct to a famer.

This will always be the cheapest option (but you'll also want to take travel & transport costs into consideration), as you're getting them directly from the source.

This is usually where you'll want to go to if you're looking to get a decent number of bales too, as they should have plenty available and more importantly be of a consistent quality.

If you are sourcing from a farmer, stay away from any moldy or smelly bales, as these are already in the process of decomposing. Also make sure no herbicides or pesticides have been used on them as it's going to severely impact what you try to plant & grow inside them.

Alternatively you can also go to a local farm supply store.

We have one located in our city that serves the local lifestyle farmers that live just on the outskirts of the city. It basically acts as a small distribution shop for products for common livestock. You may have a similar store in your city too. This will be your next cheapest option.

Most garden stores will also stock a ready supply of straw bales (just give them a quick call to inquire), and similarly there are always pet shops which sell them as bedding for rabbit hutches, chicken coops and so on.

Although keep in mind, you're always going to pay a premium at garden stores & pet shops as they usually get them from the previous sources just mentioned.

One option is to check in with your local gardening club, or local farmers feed co-op if you have one in your area. Often time's members will be doing a "group buy" and buying in bulk, so any discounts are passed onto members.

Finally, keep in mind that in most areas straw bale supply is seasonal depending on the harvest times of the wheat farmer. So you're going to pay a lot less when there is more supply around (right after harvest) as opposed to the end of winter.

So there is no harm in purchasing your bales a season before and storing them over winter.

So spend some time looking around, and you should be able to pick up any number of straw bales from anywhere as little as $5 - $10 per bale.

How Many Will I Need?

This is going to depend on exactly what it is you want to achieve.

If you're just looking to start small, and perhaps get a decent herb garden growing on your patio, then you'll probably only need one or two.

If you're going to scale and grow the majority of your produce via the straw bale gardening technique, then you'll obviously need to get more.

And all of this will depend on the space you have available, what you plan on growing in your bales and how much of each of those plants.

So like with any good gardening practice you'll want to plan that in advance.

You'll have a better understanding of this when we look more closely at designing your straw bale garden.

Designing Your Garden

With straw bale gardening comes great flexibility.

Given that you can place a straw bale garden literally anywhere, you really are only limited by your imagination, ambition and the space you have available to work with.

However, there are a few important things you'll want to consider as you're planning your garden, to ensure you're setting yourself up for less overall "work", maximum crop productivity, and maximum enjoyment too.

Sunlight & Shading

As with any garden, sunlight is critically important.

Without decent sunlight, all plants will struggle. It's required to be able to efficiently carry out photosynthesis where the sunlight itself is converted into chemical energy to be used by the plants. And if your plants are struggling, you can't expect them to produce spectacular yields.

In addition to that, warm, humid, damp environments are ideal conditions for numerous types of plant disease and bacteria to become established and proliferate, especially on foliage, so good sunlight will ensure your plants leaves remain as dry as possible.

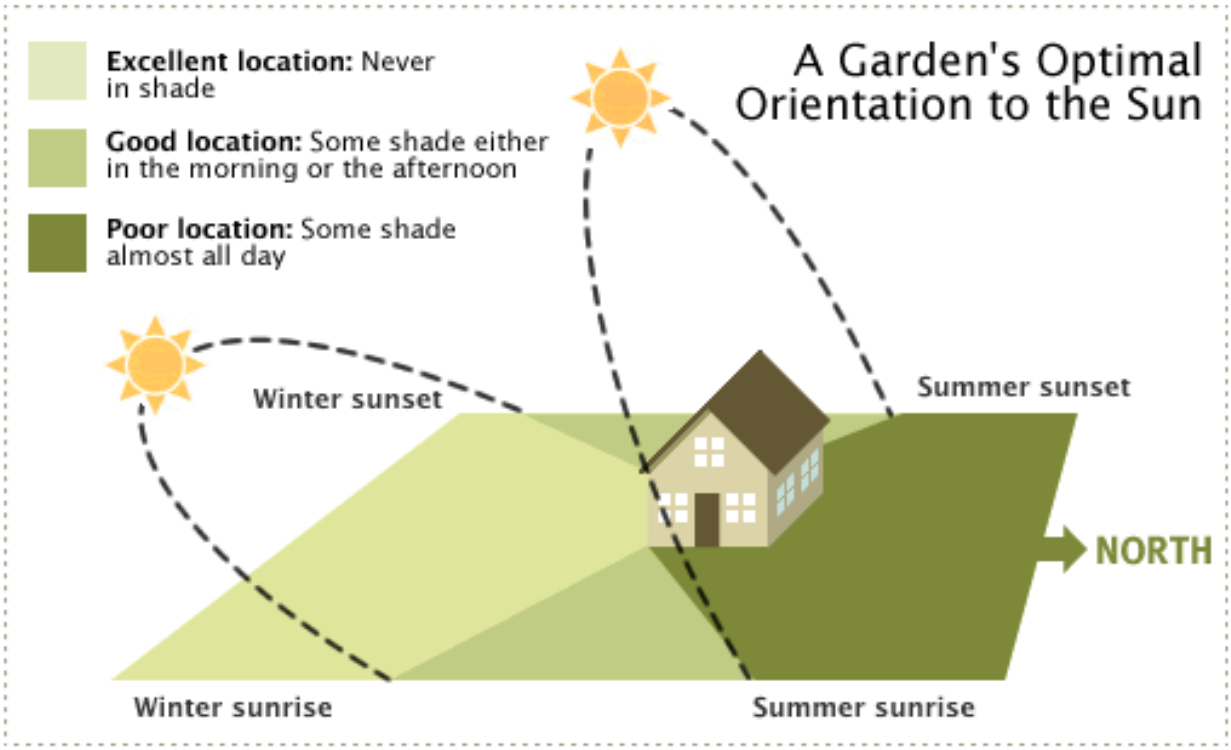
So you'll want to try to position your bales where they'll be able to receive maximum sunlight in your garden. Around 6 – 8 hours per day is ideal.

Many plants will happily survive and still produce decent crops with less sun, but in terms of maximum productivity and crop yields, the more sunlight throughout the day the better.

That means you'll want to take into account how surrounding buildings (houses, barns, sheds, etc.), large trees or fences, might impact the amount of available sunlight that will be available to your plants, by possibly casting shade over them.

Keep in mind the east to west progress of the sun over the day, and how you position your bales so this can be maximized. Maximum early morning sun is also ideal, as it will help mitigate the impact of any minor frosts or dewy mornings by drying out your plants foliage faster – allowing them to photosynthesize more effectively throughout the rest of the day.

It will also help to reduce the impact of the many diseases that prefer damp leaves.



You'll also want to take sunlight into consideration when deciding on the various plants you wish to grow in your straw bales (and where you'll grow them) as well.

For example, if you're growing taller plants that are likely to cast a lot of shade over other plants in your garden, it's much better to grow these at the ends or back of the garden to reduce the impact of shading. If you were to grow these in the middle, the plants on the west side will be shaded for a good part in the morning, and the plants on the east will be shaded for a good part in the afternoon as the sun moves through the sky.

So if you plan on growing a wall of beans up a supporting trellis for example, think about how that's going to impact everything else you're growing too and position it accordingly.

Watering

Another consideration is to position your straw bales with ease of watering in mind. That will ultimately mean you'll want them to be within distance of a nearby tap and garden hose.

In addition to that, you'll want to think about water run-off and drainage.

Straw bales are very permeable, and being above ground, water will have a tendency to run out the sides of the bales (as well as the bottom) and that could potentially turn your access pathways into a muddy mess – especially if that water has nowhere to go.

If you're simply placing your straw bales on a lawn, the impact of this run off will be less, as your lawns will simply soak up the run off going through the bales.

However, if you also plan on placing something underneath your bales - which is an excellent idea to ensure weeds don't grow up into the bales from the lawn below - then make sure that it's permeable rather than a solid plastic material that would encourage the water to pool.

Standard garden weed matting is ideal. It provides holes small enough for the water to pass through one way, but those holes aren't big enough for the weeds to grow up the other way.

Solid black or clear plastic sheeting isn't ideal as the water will have nowhere to go and it will sit and pool at the bottom of your bales on the plastic.

This has the potential to create a really waterlogged anaerobic environment, which will starve the bottom of the bale of oxygen, encouraging mold to grow, and allowing undesirable bacteria and microbes to take hold.

That's not only really bad for your plants, but it can also become really smelly too.

If you've ever let a compost bin go anaerobic by keeping it too damp, and not turning its contents over on a regular basis to allow oxygen to get through, and you notice a thick black sludge leeching out the bottom, you'll know the smell.

If water run-off and drainage becomes a serious problem for your access paths, you might like to consider covering them all with weed matting or some other permeable material as well. You can even lay down any additional straw that you might have for this purpose too.

Or simply get a decent pair of gumboots ;-0

Ease Of Access

One of the main attractions of straw bale gardening is that it's a lot easier than managing traditional garden beds. So we want to keep things easy, and that means we want to position our bales where we'll have ready access to maintain them and all of the plants we're growing.

So you'll want to make sure you position your bales where everything is within easy reach.

If you're going to run your bales in rows, and have multiple rows running parallel to each other, you'll want to make sure you've got all plants within easy reach so you don't have to strain to

get in there to inspect and prune them, and eventually harvest your goodies.

You'll also want to make sure you leave enough space between your rows so you can comfortably walk up and down them. Leaving roughly a 1 meter (3-4 feet) access pathway in between your rows is a good idea.

Leaving Decent Access Pathways Between Rows Will Make Garden Management Much Easier

That's enough to fit a wheelbarrow up and down, and it will mean you'll be able to grow additional plants up the sides of your straw bales without knocking into them as you're moving up and down and working your rows.

Something else to keep in mind is how anything you decide to grow might impact your ease of access in the future. Plants like Pumpkin or Squash (which grow amazing well in straw bales), will obviously have the majority of the plant and fruit growing & sprawling out over the sides.

So you might want to think about where you're going to plant these, and where you'll train them to grow, so they don't impact your ease of access to other areas of your garden.

Plant Support Structures

You'll also want to think about how you plan to support plants that might require staking such as your tomato plants, or runner varieties (like beans and peas) that will require trellis or some other support for vertical growth.

I mention this because if you position some of your bales against a shed or fence (remember to also keep available sunlight in mind), you might want to run a simple trellis up the side and plant your vertical runner varieties towards the back of your bales.

That way you're making use of support structures that are already available.

Alternatively you might like to create a purpose built vertical support structure that runs the length of your entire straw bale garden…

Here you can drive metal fence posts into the ground at the end of each row (and potentially one or two in the middle as well depending on how long you make your rows), and then run multiple wires horizontally between them, at set intervals up the height of the posts.

This gives you more freedom in terms of being able to grow what you like, where you like, knowing you'll always have a decent support structure to be to tie off to and brace all of your plants with, where and when required.

Another method (that can be used instead of, in addition to) is to stake individual plants within the bales themselves as needed. For example aside from dwarf varieties, most tomato plants will become top heavy and will eventually require staking or some sort of caged support.

You do this just like you would stake a plant in your regular garden.

However, keep in mind; you'll want to use stakes that are long enough to drive right into the ground below your bales for extra support.

That's because the straw bales themselves are just sitting on the top of the ground. If they become too top heavy and wind is a problem, we don't want vibrations to slowly loosen the bales via the movement of the stake and associated weight of the plants.

As much as possible, we want to keep our bales nice, tight and compact, so we don't upset the growing environment we're creating inside them and the rooting systems of our plants.

Driving a stake right through the bales into the ground below will help keep everything well-grounded and in securely place.

Yet another option you can consider would be to use ready-made caged supports which you can find at your local garden center (or you may already have some which you've used in your traditional garden beds).

Those made from metal rather than plastic are preferred, as they're much stronger and will provide much greater support for your plants. They're ideal for supporting tomatoes plants.

You'll also want to use cages that have quite long wire feet which you can push firmly down into the bales to firmly secure them.

Securing Your Individual Bales & Garden

We always want to keep all of our straw bales nice, tight and compact, so we don't upset the growing environment we're creating inside them and the rooting systems of our plants.

If they aren't securely held together, over time they have a tendency to start to naturally collapse as more and more of the internal straw starts turning into compost. Ultimately all that is holding them together is the straw surrounding the outside of the bale.

That means we want to secure each and every bale, by wrapping garden twine around them.

We want to do this two or three times, evenly up the height of the bale, with the twine running parallel to the ground.

This will ensure the twine doesn't start to rot from the bottom, or get in the way of planting on the top of the bales (as would be the case if you were to wrap these vertically around the bale).

You'll likely to find that Individual bales have already been secured like this when purchased.

But if not, or if they don't seem secure enough to you, you can prop them up with some extra garden twine. If you're able to find a twine made from natural fibers (rather than the synthetic plastic variety), select to use that as you'll be able to simply throw it in the compost bin with the rest of your straw bale at the end of the season as well.

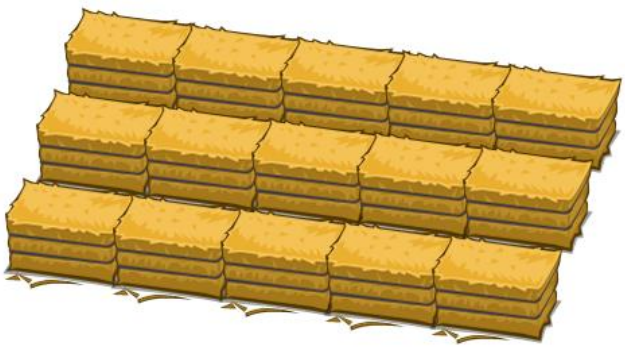
Similarly, whether you lay your individual bales into rows, or any other configuration that suits your personal needs, make sure the bales are tightly packed together so they support each other as an entire unit.

Growing In Single Rows

One of the most common arrangements of a straw bale garden is to place your straw bales lengthwise, one after the other, in single rows – similar to how you might layout traditional garden beds. There are several advantages to this arrangement.

You can extend these rows out as long as you would like too for more growing space, simply by adding extra bales to the end of the rows.

You can also arrange several rows parallel to each other, and by leaving easy access paths between each row you'll make managing your garden easier. That is you'll be able to comfortably reach two sides of your garden from the same pathway simply by turning around (i.e. you won't have to walk around the other side).



This arrangement is also ideal in very tropical or humid environments as it allows for maximum air flow around the straw bales

themselves (and also the plants growing inside them).

Any watering system you setup (a drip irrigation system into the bales) becomes easy to setup too – you can simply run it along the top of each row.

Any permanent (or semi-permanent) structures you create for vertical growth support also becomes very straight forward – simply set them so they run along your straw bale rows.

The main limitation here is obviously going to be the space you have available (keeping in mind you can make this as small or as big or as long or as short as you desire).

Doubling Up Your Bales

Another option (which you can use as an alternative or in addition to single rows) is to double up your bales, placing them snuggly together.

This was actually the configuration of the first straw bale garden my father and I setup. We simply placed 4 straw bales, arranged 2 by 2, to create a very solid rectangular shaped growing bed. It was placed right next to our 3 traditional garden beds.

There are a few advantages to this method.

You're making use of more of your available space as you don't have an access pathway running down the middle of the bales. So your access pathways aren't "wasted growing space".

Keeping things 2 by 2 also means that you can quite comfortably reach right across both bales from one side to the other, if you need to.

You're also creating a much more robust growing bed.

If you tried to push over a single straw bale, you'd probably find it pretty easy. If you tried to push over two bales sitting snugly side by side, you're going to find it much harder. So it's naturally a more robust configuration. In addition to that, if you wanted to make it even more robust, you can secure all the bales together as one individual unit with your garden twine too.

This gives you the ability to grow larger plants that require more room and/or support from the growing medium, vegetables such as corn or potatoes.

Given that corn grows extremely tall, and can become pretty top heavy as the cobs develop, a

single bale usually just isn't enough to support the movement of the plants in the wind.

The tradeoff here is that you'll lose the vertical growing space between the bales, but you're not actually loosing too much, as you're still able to plant vertically right around this layout too.

Straw Bale Raised Bed Combo

This is one option that I wouldn't recommend.

I'm including it here simply to give you some food for thought. The truth is this isn't really a straw bale garden as we like to think of one as – it's really a traditional raised garden bed that's being supported by straw bales to keep it raised.

Now don't get me wrong, it's a smart way to create a raised garden bed, as straw bales are certainly a lot cheaper than railway sleepers or other timber structures you might build with…

Straw Bales Arranged To Support Soil Bed Inside

…and they're not permanent structures so you've got flexibility to easily remove it in the future (although you're going to be shifting a lot of dirt). Plus you can plant in the bales too.

However, we're reintroducing the one component that we don't want.

One of the main reasons we garden with straw bales in the first place.

And that's the soil.

Along with the soil comes soil borne diseases and pests, and of course weeds too. If these become a problem in the soil, they're going to containment the straw bales as well.

So we're just creating more work for ourselves, especially when we can quite easily create the same amount of growing space using straw bales alone.

However, if you like the idea of this hybrid setup, by all means go for it.

Getting Creative

Your garden is your garden so you can be as creative as you like.

If you don't like the idea of running rows of bales or limited space is restricting your options, then make use of what you have available and be creative. At the end of the day, the great thing about straw bales is they're easy to place however and wherever you like.

A 3 x 3 Bale Garden Tucked Into The Backyard Before And After

Conditioning Your Straw Bales

Conditioning your straw bales before planting in them is really important.

It's a process which takes about 10 days to 2 weeks to complete. So you'll want to take that into account based on when you also plan to start planting. If you want to start planting early spring, you might want to setup your straw bales & start conditioning them late winter.

Whatever you do, just make sure your bales are where they're going to stay for the entire growing season before you begin conditioning them. They'll become very heavy when soaked and for that reason alone you don't really want to try moving them around afterwards.

What we want to do here is to kick off the internal composting of the bale itself.

This will begin to start the straws transition into rich compost, which in turn it makes nutrients more readily available to your plants, much sooner.

It also helps to ensure your plants aren't damaged in the early stages.

Composting anything produces lot of internal heat as the organic material starts to break down, and it's no different inside your straw bale. Initially (until things stabilize) these temperatures can become high enough to damage or even kill seeds and young seedlings.

So we also need to condition our bales to get them past this stage before planting them out, to ensure whatever we plant is going to be warm and happy, rather than withered and cooked.

In addition to that, one of the few downsides to growing in straw bales is a lack of nitrogen.

That's because the microbes inside the bales are using much of what is already available, to actually break down the bale itself. This reduces the amount available to the plants.

So we want to introduce this ourselves and preferably via organic means.

It will help the microbes do their job quicker & more efficiently. And perhaps more importantly nitrogen is essential for literally every process of plant growth and photosynthesis. It's the nutrient that's associated with the leafy green vegetative growth.

If you've done any research, you'll find there are different methods of conditioning a bale, and different people have different preferences (and are always trying different things), but they all have the same end goal in mind as just previously described.

So let's look at a couple of different methods now…

However just as an aside before we do that, I should point out that your straw bales are likely to

become pretty smelly during the conditioning process. Don't worry too much about this, it's entirely normal and will pass after a few days once things settle down a bit. But if you've got neighbors in close proximity, you might want to get your wife to take them around some freshly baked cookies, so they don't think you've gone and buried her in the garden ;-0

Note: The method of identifying what's in a fertilizer is the (Nitrogen-Phosphorus-Potassium) ratio which will be clearly labeled. For example (20-10-10) would mean that if you had 100 pounds of that fertilizer there would be 20 pounds of available nitrogen, 10 pounds available phosphorus & 10 pounds of available potassium. The remaining 60 pounds are inert or inactive ingredients.

Standard Conditioning Method…

Here is one of the more common methods that you'll find people using…

Days One, Two & Three

The first thing you'll want to do is drench your bales in water.

Straw is quite a porous material, and unless the bale has been out in the elements, it's going to be incredibly dry right throughout. In wetting it we're helping to setup a better environment for the microbes to grow and multiply in and to also help the straw break down more readily.

So on day one; drench your bale in water

On day's two and three: continue to water your bales to ensure they remain wet.

Days Four, Five & Six

Here you'll begin introducing fertilizer to help get the decomposition process going (by specifically adding more nitrogen into the mix).

You can select and use an organic fertilizer that is rich in nitrogen and add approximately 2 cups per straw bale, or alternatively add 1 cup of ammonium sulfate (21-0-0) per bale.

Water this into each bale well, the idea being to get it right down into the interior of the bale.

Days Seven, Eight & Nine

Here you'll continue to do the same but reduce the amount of fertilizer you're using by half.

Day Ten

You can stop adding your nitrogen rich fertilizer at this point, but if you've used an entirely nitrogen based fertilizer during the initial stages (rather than a general organic fertilizer) then you should also introduce some potassium and phosphorus.

Potassium can be introduced using wood ash, and phosphours can be introduced using bone meal (2 cups for each bale).

Water your bales again.

Day Eleven Onwards

From this point onwards you're either going to be ready to plant or soon will be.

You'll want to feel the top of your straw bales (and/or insert your finger down into the interior) to see how much heat they're still producing.

We want to ensure they've cooled down enough for planting – which is when they've roughly reached body temperature – or 30 degrees C (90 degrees F).

If they still seem excessively warm, simply leave them for another day or two and keep checking them until they've cooled down enough and it's safe to plant your plants.

If you don't like to, or are a bit unsure about going on "touch" to decide when you're at the right temperature, you can always insert a standard thermometer into the bale to get a very accurate reading. Again, you're looking for around 30 degrees C or less.

Alternating Conditioning Method…

This method is virtually identical to the previous method.

The only real difference being that you'll alternate the days on which you water only, and then water and also add fertilizer.

Watering your bales on day one, add fertilizer the following day and so on – keeping in mind to

reduce the amounts in the same way as previously described (the first 3 alternative days you would add 2 cups of organic fertilizer – the following 3 alternative days you would add 1 cup).

Keep a notepad or mark it on a calendar so you know what you're supposed to be doing on each day (and so you don't inadvertently add too much fertilizer).

Direct Microbial Injection…

Optionally, if you want to help speed up the conditioning process, and more importantly set yourself up for a really successful straw bale garden into the future, you can also consider a direct injection of beneficial microbes at any stage during the process.

With the previously mentioned methods, you're relying on the existing microbes within the straw bale to begin to multiply. The more they multiply the more efficient the whole composting process becomes. But obviously this takes time as we're starting with a limited number.

So it stands to reason, if you're able to directly inject beneficial microbes into the bales, it's only going to be good for the whole internal eco-system you're creating.

The absolute best method I know of doing that is to brew up a decent amount of worm tea and use that as a substitute for (or in addition too) standard watering.

The general process here is to take a few decent handfuls of worm castings (worm poo) from your worm farm, and wrap them in cheese cloth or similar material (even an old t shirt would do the job – anything that allows the worm castings & water to slowly permeate together).

You'll then take a decent sized container / bucket / drum and fill it with water.

Into this you'll add some molasses, and a decent air stone powered by an aquarium air pump.

You then add the wrapped up worm castings, turn the air pump on, and leave the whole thing to "brew" for around 24 hours. Here's what's going to happen…

The beneficial microbes & bacteria from the worm castings will begin to consume the molasses

that has been dissolved into the water, and will start multiplying into the billions.

The molasses acts as a food source for them.

The longer we wait (and the larger the volume of water and molasses we use) the more potent this brew will become.

The aquarium pump and air stone are used to ensure the water remains well oxygenated so we're only breeding microbes that are going to be beneficial to the garden. The bigger the air stone (and therefore the more oxygen you can introduce), the better.

Once the brew is ready (it will resemble the color of a really weak drinking tea that you would make for yourself), simply apply it to your straw bales, just as you would water them normally.

All of the beneficial microbes and bacteria will then enter the straw bales, and make themselves at home, creating an ideal environment for the composting process to become more efficient.

You can introduce this into your bale conditioning process at any stage.

Simply apply it during the watering only stage. If you don't have enough to really drench all of your bales, there's no harm in splitting what you've brewed between them, and finishing them off with water to ensure the straw bales are well soaked.

Keep in mind that this isn't something you can "overdo".

Unlike adding too much fertilizer to your garden (which can have just as much of a negative impact as not enough i.e. burning the roots of your plants) here we are simply dealing with adding more beneficial microbes – so absolute worst case you'll be introducing more worm food for any worms that also happen to be making their home in your straw bales.

So your limitation is really only your desire to keep on brewing.

However it's something you might like to seriously consider doing every week, or fortnightly, for the life time and continued well-being of your garden.

Once you introduce this worm tea regime into your gardening habits, you're never going to look back and you'll be kicking yourself that you didn't start doing it sooner.

I'll give you a specific recipe you can use shortly.

Once your bales have been well conditioned, it's time to get planting…

Planting Your Beds

It's time to introduce your new babies into the garden and get planting!

You can plant your straw bales out just as you would plant in a regular garden, and in general you simply need to follow the same spacing, sunlight and watering directions that you'll find on the back of your seed packets (or seedling tags).

That also means you can (and should) utilize good companion planting practices too, in order to make the most of available space, and help to naturally deter pests & disease.

There are two main techniques people use here.

You might prefer one over the other depending on whether you like sowing directly from seed or prefer planting seedlings (or you'll probably find you'll use a combination of the two).

In both cases what you will want on hand is some potting mix, some good quality rich compost and some well-aged manure (horse or other) as an initial growing medium.

Planting In Pockets Or Holes…

In this technique you'll create pockets or holes directly into the straw itself.

This is more suitable for planting seedlings (or a few individual plants) rather than laying down an entire bed of seeds. It's also the technique you'll want use if you plan on planting the vertical sides of your bales.

Using a garden trowel or hand spade (and potentially your hands too), dig out pockets around 15cms deep (6 inches) in the top of the straw where you want to place your seedlings.

Loosen and pull out enough straw to create your pocket for planting.

You then want to fill this pocket with your growing medium.

This is required in order to give your seedlings something more suitable to establish a good initial rooting system in - until the plants have matured enough and their roots begin expanding down into the straw bales themselves.

It can be a mixture of good quality rich compost (possibly last season's well composted straw bales), and well-aged horse manure. Alternatively you can place the manure at the bottom of

the pocket, followed by your compost, and finished off with some potting mix on the top.

If you're planting from seed, you can simply plant the seed in the potting mix layer of the pocket at the depth as instructed on your seed packet.

If you're planting from seedling, remove your seedling from its container.

Gently loosen its root system if it's become a bit root bound.

Then make another hole inside your pocket, and insert the entire seedling (including its existing growing medium) into the hole. Finish it off with some potting mix around the exposed base of the seedling for extra support.

If you're creating pockets in the vertical sides of your bales, try to create your pockets at around a 45 degree angle, pointing down into the bale. It will encourage the plant's root system deeper into the middle of bale itself, providing greater stability for the plant as it matures.

Straw Bale Being Planted Using The Pocket Hole Method

Planting In Flat Beds…

This method will require more growing medium and potting mix.

However it's better suited if you plan on propagating seeds directly on the beds, or you've setup a large number of bales and you would simply prefer not to have to dig so many pockets.

Here you'll cover the entire top of your straw bale beds with approximately 15cms (6 inches) of your growing medium (compost and manure) and you can finish it off with some potting mix.

This allows you to plant directly into the growing medium, and as the plants sprout and mature, the roots will work their way down into the straw bales beneath.

Flat Bed Planting Method – Growing Medium Covers The Entire Top Of Your Bales

Protecting Seedlings & Extending Your Season…

One great advantage to a straw bale garden is that you can extend your growing season.

As our straw bales are slowly decomposing and self-composting from the inside, a certain amount of heat is continually being produced as a by-product of that process. This keeps the internal temperature of the bales regulated and ideal for the root systems of your plants.

So it means you can comfortably get growing a few weeks earlier than you usually would in a traditional garden bed. However if you do choose to do this, you will want to ensure you provide some extra protection from any early morning frosts that are still hanging about.

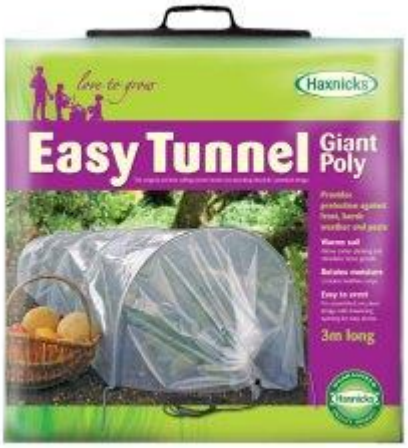
More importantly, if you're growing direct from seed in your straw bales you'll also want to ensure the sprouting seedlings are well protected from all of the elements (and any pests) to give them the best start in life.

A Mini Hoop / Poly Tunnel Can Be Rigged Over Your Bales For Extra Protection

The easiest way to do this is to rig up some form of poly tunnel to create a mini greenhouse environment around your bales. You can purchase ready-made mini hoop / poly tunnels from your local garden center or online. They are relatively inexpensive and are generally the most

convenient option depending on size.

[18 Foot Row Cover & Plant Protector (x2) ~ $35 From Amazon]



[Giant Easy Poly Tunnel ~ $25 From Amazon]

You can simply unroll them, secure them to your bales, and when the weather conditions improve, roll them back up and pack them away for use during the next season.

Alternatively you can make use of whatever else you have available that will provide protection from the elements but still let sunlight and some air flow through.

This might include using old windows you have lying about, your own uniquely rigged clear plastic covering, or securing plastic seed starting tray tops over the proportion of your beds where you've planted your seeds.

Ultimately what you'll use here will be determined by the layout of your bales.

One thing you will want to ensure is that you provide enough space so your seedlings have room to grow. You don't want them to hit the top of your cover protection and have it hinder their growth, so provide ample room and remove your cover entirely when ready.

You'll also want to ensure there is some air flow inside, so as not to completely cook your young plants on extremely hot days. In fact, on really hot days, you might want to remove your covers entirely, so it would pay to keep that into consideration when planning any protection rigging.

You'll also want to ensure you are still able to easily water your bales too.

If you have staked your bales at the end of each row, and have setup horizontal growing supports between those stakes (as described earlier), you can drape clear plastic polythene sheeting across the first or second support wire itself and over your bales.

You can then fasten it to the ground using bricks or some other weighted material to hold it securely in place (or if you're not going in the vertical sides of the bales – you can simply tuck it underneath them), and common clothes line pegs to secure it to the supporting wire.

In that way, it will work much like a shower curtain, which you can conveniently and quickly remove as needed by simply sliding it back to one end of your garden. Then simply slide it back out and rig under your supports to secure it when you want to set it up again.

If the plastic sheeting is wide enough, you can even extend its use by simply moving it up to the next horizontal growing support wire, as your plants get bigger.

Plastic Sheeting Can Be Seen At The End Of Each Row & Can Conveniently Be Moved To Cover The Entire

Vegetable Planting…

When planting in your straw bales use common sense and avoid overcrowding.

The number of plants for each individual bale is going to depend on how large the mature plant will grow – and that depends not only on the type of vegetable, but also the variety of that vegetable you select to grow.

For example, you'll be able to grow more dwarf variety tomato plants in a single bale (which might not need staking either), rather than standard tomato plants which will grow much larger.

So a good general rule of thumb…

For smaller vegetables 6-8 plants per bale, for larger vegetables 2-4 plants.

For vegetables which spread and cover the ground like Pumpkin, no more than two plants per individual bale is recommended.

These plants tend to be very nutrient hungry (and love growing in compost rich environments), so keeping them to a minimum will ensure one bale is able to provide enough nutrients to both plants for a good healthy harvest.

At the same time you'll also be able to fit more individual smaller plants like lettuce, spinach, cabbages, and so on, on a single bale - again, depending entirely on the varieties of each vegetable you select to grow.

If you want a continuous supply of fresh salad and greens over the season, rather than continual replanting, consider choosing perpetual "cut and come again" varieties.

You can even designate a bale or two for this specific purpose.

If you're ever unsure, simply refer to the seed packets or seedling tags for directions and you can't really go wrong. However, here's a basic overview of vegetable type and suggested number of plants per bale which will give you a good idea…

Vegetable Type	Plants # Per Bale
Beans & Peas	(as per packet directions)
Broccoli, Cauliflower, Cabbages	6-8 (or as per packet directions)
Carrots & Parsnip	(as per packet directions)
Corn	4-6
Cucumbers	4-6
Lettuce & Spinach	10-12 (or as per packet directions)
Onions & Garlic	(as per packet directions)
Peppers	4
Potatoes	2
Pumpkin & Cantaloupe	2
Squash	2-4
Strawberries	3-4
Tomatoes	2-3
Zucchini / Courgettes	2-3
Other	(as per packet directions)

As far as companion planting goes you can either plant companion crops in the same straw bale if it makes sense to do so depending on the size and type of vegetables, or you can plant in a neighboring bale (the closest bale next to, or alongside it) for a similar positive effect…

Plant Beans & Peas

Plant Beans & Peas with or near Peas, Beans, Carrots, Beets, Broccoli, Brussels Sprouts, Cauliflower, Celery, Corn, Cucumbers, Eggplant, Kale, Potatoes, Radishes, Strawberries, Swiss Chard. Both Beans & Peas will enrich the soil with nitrogen fixed form the air, and they're usually used in a crop rotation cycle in a traditional garden for that reason. Avoid planting near members of the allium family (Onions, Leeks, Garlic, Scallions), as it will inhibit growth.

Match With These Herbs ->

Coriander, Marjoram, Parsley, Rosemary

Plant Broccoli

Plant Broccoli with or near Beans, Cucumber, Garlic, Lettuce, Onion, Potato, Radish, and Tomato. Celery, Onions and Potatoes are said to enhance Broccolis flavor.

Match With These Herbs ->

Basil, Dill, Marigold, Mint, Hyssop, Nasturtium, Rosemary, Sage, Thyme

Plant Cauliflower

Plant Cauliflower with or near Bush Beans, Beets, Celery, and Cucumbers.

Match With These Herbs ->

Sage, Thyme, Oregano, Mint

Plant Cabbages

Plant cabbages with or near Onions, Celery, and Potatoes. Cabbages don't go well with Tomatoes, Peppers, Strawberries, Eggplants, Lettuce and Pole Beans.

Match With These Herbs ->

Dill, Basil, Sage, Oregano, Chives, Mint, Marigold, Rosemary

Plant Carrots

Plant carrots with or near Onions, Lettuce, Leeks, Radish, and Tomatoes (Tomato's might stunt Carrot growth, but they won't impact flavor). Planting Onions and Carrots next to each other in separate rows will help to repeal Carrot files. Leeks and Carrots can be grown together and will do the same, and when the Carrots are harvested, the Leeks can be left to mature for later.

Match With These Herbs ->

Parsley, Marigold, Chives, Sage, Parsley, Rosemary

Plant Parsnips

Plant Parsnips with or near Bush Beans, Garlic, Onion, Peas, Peppers, Potatoes, Radish and Squash. Parsnips enjoy regular and frequent watering.

Match With These Herbs ->

Marigold, Parsley, Rosemary

Plant Corn

Plant Corn with or near Beans, Cucumber, Melons, Peanuts, Peas, Potatos, Pumpkin, Soybeans, Squash and Sunflowers. Plant your Corn at the opposite end of the garden from your Tomatoes (ideally at least 20 feet away) as both plants suffer from attacks by the same worm (Corn earworm or Tomato fruit worm). If you plant pole Beans at the base of the Corn when it is roughly a foot high, the Beans will climb the Corn as a natural support.

Match With These Herbs ->

Lamb's Quarters, Parsley, Dill

Plant Cucumber

Plant Cucumber with or near Corn, Beans, Peas, Beets, Radishes and Carrots. If planted with Corn, your Cucumbers will also grow up and over the Corn. Cucumber likes near identical growing conditions to Corn and Beans so they go very well together.

Match With These Herbs ->

Marjoram, Oregano, Marigold, Dill

Plant Lettuce

Plant Lettuce with or near Beets, Broccoli, Climbing and Bush Beans, Carrots, Cucumbers, Onion, Radish, Garlic and Strawberries. Lettuce and Cabbage don't actually go well together, as Cabbage will inhibit its growth. Lettuce doesn't mind partial shade.

Match With These Herbs ->

Dill

Plant Spinach

Plant Spinach with or near Peas, Beans, Cabbage, Cauliflower, Celery, Eggplant, Onion, Peas, Strawberries. Spinach also doesn't mind partial shade.

Match With These Herbs ->

Coriander, Dill

Plant Onions

Plant Onions with or near Tomatoes, Carrot, Leek, Beets, Strawberries, Brassicas, Lettuce and Peppers. Onions with Carrots works well to help deter Onion flies, and planted with Strawberries they help Strawberries to fight common diseases.

Match With These Herbs ->

Parsley, Dill

Plant Garlic

Plant Garlic with or near Cucumbers, Peas, Lettuce, Raspberries and Celery. Garlic takes around 5-6 months to fully mature, so most people tend to plant it on the shortest day of the year (winter), and harvest it on the longest day (summer).

Match With These Herbs ->

Parsley, Dill

Plant Peppers

For sweet Peppers (Capsicum) plant with or near Tomatoes, Carrots, Okra and Onions. For hot Peppers (Chili) plant with or near Cucumbers, Eggplant, Tomatoes, Okra, Swiss Chard and Squash. Hot peppers can also be used to create a variety of homemade organic insect sprays, so they're useful to grow (and store well). Keep away from the Brassica family and Beans.

Match With These Herbs ->

Parsley, Basil, Marjoram, Lovage, Rosemary, Oregano

Plant Potatoes

Plant Potatoes with or near Bush Beans, Carrot, Celery, Cabbages, Corn, Horseradish, Peas, and Onions. Horseradish planted at the corners of a potato patch will help protect them from potato scab (as will comfrey). Plant your potatoes deep inside your straw bales, as new potatoes grow off the stem of the plant.

Match With These Herbs ->

Basil, Marigold, Comfrey

Plant Pumpkin

Plant Pumpkin with or near Corn, Beans, Melons and Squash. Keep in mind how Pumpkins will spread over the ground covering quite a large area and position accordingly.

Match With These Herbs ->

Marigold, Oregano, Nasturtium, Dill, Catnip, Marjoram

Plant Squash

Plant Squash with or near Beans, Corn, Cucumbers, Melon, Pumpkins and Onions.

Match With These Herbs ->

Borage, Marigold, Nasturtium, Dill, Oregano, Catnip, Marjoram

Plant Strawberries

Plant Strawberries with or near Beans, Lettuce, Onions, and Spinach. Keep away from the Brassica family. Bordered with Thyme it will create a natural barrier to deter worms. Borage will also help to improve general resistance to insects and disease.

Match With These Herbs ->

Borage, Thyme, Sage

Plant Tomatoes

Plant Tomatoes with or near Beans & Peas, Carrots, Celery, Cucumber, Garlic, Lettuce, Onions and Peppers. Planting with basil helps to improve growth, flavor and will repel flies and mosquitoes. Borage will help to keep the tomato worm away. Mint and Chives will help to improve flavor.

Match With These Herbs ->

Basil, Chives, Marigold, Mint, Parsley, Borage

Plant Zucchini / Courgettes

Plant Zucchini with or near Beans, Peas, Radish, Spinach, Squash and Corn.

Match With These Herbs ->

Parsley, Mint, Nasturtiums

Planting Herbs…

All herbs will do will in straw bales.

You can place these individually between plants where there is still available space on the top of the bales, or better yet, plant them vertically along the sides and ends.

The vertical sides aren't ideal for larger plants that might become top heavy, but herbs will do extremely well. You can selectively companion plant your herbs near your vegetables, and many herbs also deter common pests which is always a good thing.

Consider planting…

Plant Basil

Plant Basil with or near tomatoes to help them ripen and improve their flavor. Also beneficial with beans, beets, cabbage, peppers, eggplant, marigolds, oregano, and potatoes.

Plant Sage

Plant Sage with or near cabbage, carrots, strawberries and tomatoes to enhance their growth.

Plant Lavender

Plant Lavender as a good general insect repellant and to attract more bees into your garden.

Plant Coriander

Plant Coriander with or near chervil and spinach. Planting near legumes (beans or peas) will help the coriander itself. Coriander will also attract beneficial insects like tachninid flies, parasitoid wasps and hoverflies to your garden.

Plant Catnip

Plant Catnip with or near beets, pumpkins and squash. It will help to repeal ants, aphids, many different beetles, cockroaches, and squash bugs. Ideally plant this on the sides of your bales (not

in the garden itself) so any neighborhood cats don't come rooting around inside your garden.

Plant Marjoram

Plant Marjoram with or near beans, chives, eggplants, pumpkin, squash and cucumbers to help improve yields.

Plant Oregano

Plant Oregano with or near broccoli, cabbage and cauliflower to help repel cabbage butterfly and if near cucumbers it will help to repel cucumber beetles.

Plant Chives

Plant Chives with or near tomatoes and carrots to improve flavor and growth. It will also be beneficial to broccoli & cabbages. Chives help to repeal Japanese beetles and carrot rust fly.

Plant Mint

Plant Mint with or near cabbages, tomatoes & other members of the brassica family (Broccoli, Brussel Sprouts, Cauliflower). It will help to repeal cabbage months, ants, beetles, fleas, aphids, and will attract beneficial insects like hoverflies and wasps.

Plant Marigold

Plant Marigold with or near broccoli, cabbage, cucumbers, eggplant, kale, potatoes, squash and tomatoes. Marigolds will help to deter all kinds of beetles and tomato worms.

Plant Dill

Plant Dill with or near brassicas, chervil, corn, cucumber, lettuce and onion. Dill plants will help to repell aphids, cabbage looper, spider mites and squash bugs. It will also help to attract bees, wasps, and hoverflies.

Plant Parsley

Plant Parsley with or near carrots, corn, peppers, onions, peas, and tomatoes. It will ward off various types of beetles and attracts hoverflies. Don't plant near mint.

Plant Rosemary

Plant Rosemary with or near cabbages, beans, and carrots. It will help to deter cabbage moths, bean beetles, carrot rust fly.

Growing Mushrooms…

I love growing mushrooms.

They seem to magically pop out of nowhere after a month or two of waiting, when you least expect, and then rapidly grow like nothing else, almost doubling in size each day, until they're ready to harvest.

The first variety I tried my hand at were Oyster Mushrooms from a "home starter" kit that I purchased from the local garden store one day on a whim.

About 6 weeks later - quick fried in some garlic butter – they were amazing!

If you like mushrooms, and although it might not seem like your usual crop, you should give it a go as well - in fact I encourage you to try something new.

Mushrooms aren't the cheapest thing to buy at the supermarket, and there's nothing like picking them off your own bales and cooking them up fresh just minutes later.

In fact, odds are, you're going to get a few random mushrooms pop up in your straw bale garden anyway, as straw is the perfect growing environment.

Note: Don't eat any mushroom that you can't identify. The mushrooms that pop up "randomly" in your bales could be any variety so unless you know exactly what they are (and have specifically grown them), you might want to pull them off and throw them away. Or better yet visit a discussion community online where you can post a photo and have other more experienced mushroom growers help you identify them.

The key to growing mushrooms is patience.

Once you're setup, all you really need to do is ensure the growing medium remains moist (not soaked), and your mushroom bale remains well shaded (no direct sunlight).

You can buy mushroom spores online direct from a professional mushroom farmer. Check out…

http://www.100thmonkeymushrooms.com/

You might also find them at your local home & garden store although these tend to be more expensive as they're sold as "kits" - more for the novelty factor than yield in mind.

If you've never grown mushrooms before, I'd recommend you start with Oyster Mushrooms as I did, as they're easy to grow, tasty, and are readily identifiable (white & shaped like an Oyster).

The mushroom spores will come in a "substrate" which is usually straw (sometimes woodchips).

Oyster Mushrooms Growing In A Straw Bale

What you want to do is to "inoculate" your straw bale with these spores.

That basically means to introduce your mushroom spores into your straw bale.

The first thing you'll need to do is to make sure your straw bale is well soaked through with water. This will help to make the straw fibers less rigid and more attractive to the spores.

Once well soaked, you'll then want to make several holes in the side of your bale, pulling out and keeping the straw handy.

You want to work around the bale, aiming for 2 holes 1/3rd the way up on each short side of your bale, and 3 or 4 holes on the longer sides. Repeat the process about 2/3rd of the way up.

You want the holes to go at least ¼ of the way into the bale.

What we are trying to do here is to spread the spores around the inside of the bale as much as

possible. It will give them a better opportunity to take hold and spread internally.

Then break up your substrate containing the spores and divide it evenly based on the number of holes you've created, placing some into each hole.

Replace the straw that you originally removed from the holes to plug them up a little bit.

You'll then want to cover your bale with a tarp, cardboard, or similar material to keep the sunlight off it and help to retain the moisture. Don't "wrap" your bale air tight however.

The straw bale (and mushrooms growing inside) require some airflow.

All we're really doing here is keeping the direct sunlight off it.

From that point onwards, simply lift your cover and water your bale once per week to keep the bale moist. Do note however - you don't want to "soak" your bales when you water them. They simply need to be kept moist on the inside.

Here's what will then happen…

The spores will turn into the mycelium of the Oyster Mushroom which will spread right throughout the bale. The mycelium is the vegetative part of the fungi which will begin consuming the decomposing straw. It's a white "spider web" like substance that's hard to miss if you dig around a bit (although it's best not to disturb it too much and just let it do its thing).

Eventually it will move right throughout the entire interior of the bale.

Now is when your patience needs to kick in.

It can take anywhere from 4 - 6 weeks (sometimes longer) before you'll start to see your first signs of mushrooms - and you might not think anything is happening during that time as there won't be anything noticeable to see on the outside of the bale.

But it is all happening inside it.

The first mushrooms you'll see are primordial (baby) mushrooms.

They will be white, look a bit like the eye of a snail (usually noticeable when the caps are about the size of a pin head), and they'll literally start doubling in size each day.

When you notice these appear, it's time to give your Oyster Mushrooms some sunlight.

Undercover your bale (and you can now leave it uncovered), and water your bale 1-2 times per day until your mushrooms are ready for harvest. That will usually be around 3 - 5 days later.

You'll notice that Oysters grow in "clusters" around your bale.

You can pick these at any time, but generally, when the biggest mushroom in the cluster looks like it isn't going to get any larger (and is still "flat"), the entire cluster is ready.

You can cut them off with a knife at the base and use as needed.

Pick Your Mushrooms When The Largest Mushroom In The Cluster Is Still Flat

Mushrooms tend to come all at once in what are referred to as "flushes" and there are usually multiple flushes. That means that after around 4 – 6 weeks, you're going to be harvesting fresh mushrooms almost every day. That initial "flush" should last around 2 weeks, until no new mushrooms appear to be growing.

(For that reason, unless you plan on sharing them with your neighbors, you might want to learn how to dry mushrooms to use at a later date, or make some soup or knock up some other tasty mushroomy delights to keep in the freezer.)

Once the first flush has finished, you should get another one or two flushes from each bale, approximately 4 weeks apart. These flushes will keep happening until the mycelium has used up all available food sources in the bale (that's usually 2 flushes in total, 3 if you're lucky).

So once the first flush is over, you can cover your bale again, and simply continue to water it and monitor it for the next sign of primordial mushrooms appearing and repeat the process.

It really is that easy to grow mushrooms.

You don't need to prune them, worry about insects eating them, stake them, or muck about with them. You can just keep your eye on your mushroom bale (or bales) as you do your weekly check on the rest of the garden and water them as needed.

A few other things to note:

I've already mentioned this, but if other mushrooms appear, don't eat them unless you know what they are (that's why Oysters are a good beginner mushroom to get your feet wet with as you can't really mistake them for anything else).

It's entirely possible that there were spore from other mushrooms inside your straw bale to begin with (from the field it was originally harvested from), and this might sprout into whatever variety of mushroom those spores came from too.

Once the 2nd or 3rd flush has finished, you can break up your straw bale, and use that to inoculate a brand new fresh bale, and keep your mushroom growing operation going.

Your old bale could easily be broken up into enough substrate to inoculate another five brand new bales if you get really enthusiastic.

If you don't want to keep your mushroom bales going (although you'll probably become a pretty keen mushroom farmer after your first attempt when you realize just how easy it is), you can simply break up the bale and finish it off in the compost bin.

A straw bale is quite a condensed growing medium. Therefore you might want to consider adding more initial mushroom spore to your bale in order to help improve success and reduce growing time i.e. you can buy two or three spore kits and inoculate them into one bale.

The ideal temperate to begin inoculating your bales with mushroom spore is when the day time temperature is consistently sitting around 10 – 25 degrees Celsius (50 – 80F). So that would usually be early spring depending on where you live and your climate.

Finally, professional mushroom growers actually sterilize their growing medium (the straw) before they inoculate it. This is done to kill any existing (competing) mushroom spore that might already exist within it, to ensure they're growing 100% of the variety that they are planning to grow.

It can be achieved by either submerging the growing medium in boiling water for an hour, or thoroughly steaming it – to completely sterilize it. This isn't very practical with a straw bale given its size (or laying down mushroom beds in a garden in general).

So if you are really concerned about that, and if you don't have a steamer on hand, you can consider "solarizing" your bale. Simply wrap it tightly in black plastic and leave it sitting in full sun for a week to essentially "cook" it. It will have the same effect.

As a backyard mushroom grower, I personally don't worry about this, but it's entirely up to you.

Once you've mastered growing Oysters mushrooms, you can try your hand at white button or brown mushrooms to add some more variety.

You can even give them all a try at the same time if you're really keen.

If you do, it's best to inoculate only one bale per mushroom species. Otherwise one type of mushroom mycelium will outcompete the others (whichever is the more aggressive strain), meaning the others will suffer and won't decent produce (if any) yields.

Garden Maintenance

One of the greatest aspects of a straw bale garden is that they're very low maintenance and require little management.

With virtually no weeding, and not having to deal with many of the issues that growing in soil brings with it, you're going to have more time to do something else you enjoy.

With that in mind, let's take a look at the most important things you'll want to consider.

Watering…

As with growing any sort of vegetable or plant, proper watering is perhaps the most crucial element. Possibly more so with straw bales, as water tends to move out of the straw more quickly on warmer days, due to both evaporation and greater requirements from the plants themselves.

And just like a regular garden, too much water can be just as bad as not enough.

However, the good news is, it's not exactly rocket science.

What you want to achieve with your straw bales is to maintain a moist to damp environment on the inside. That is largely going to depend on the recent and current weather conditions.

It doesn't matter if the outside of your bales are dry.

The first few centimeters of the straw are usually going to be that way as it's the area that's exposed to the elements – both the sun and wind. However, if you poke your finger deep down into the bale (or pry it apart slightly with both hands), it should feel and look reasonably damp.

If it doesn't feel damp, it's time to water. If it comes out wet, let it be.

We definitely don't want to continually "soak" our bales and starve them of oxygen. It could potentially turn the environment we're creating inside them anaerobic, which will breed all sorts of undesirable bacteria and will be extremely detrimental to the plants.

If you're going to use a standard garden hose, a good rule of thumb is to water your bales just enough until you see the water starting to seep out of the bottom of the bale. It should be enough to last them a day or two depending on the sun and heat (although you'll definitely want to check daily during the height of summer).

It is also best to water either first thing in the morning before the sun gets too hot, or later in the

evening when it's starting to set (or both depending on the conditions). It's much better for the health of the plants to water at each end of the day, and you'll also save more water that way as well. Less water will be lost to evaporation.

If you're going to be away for a few days, you can use the old plastic soda bottle trick.

Simply cut away the base of an old 2-liter plastic soda bottle (or milk container), poke or drill a few "drip holes" into the lid, screw the lid back on, turn it upside down and place it into the straw bale close to the plants themselves.

Fill the bottle up with water, and it will slowly drip out over the next few days getting the water where it needs to go. It's a pretty low cost easy way to ensure your plants will be ok for a few days if you're unable to attend to your garden.

Another even more hands free option – and one well worth considering due to the time and water saving costs - is to setup an automatic watering system using a drip irrigation system or soaker hose, both of which you can set on timers.

Run A Soaker Or Drip Irrigation Hose Across The Top Of Your Bales For Automated Watering

Either of these options are ease to setup – you can simply run the hose across the top of your bales to provide water as needed.

A decent soaker hose, a hose splitter (if you need to send the water in different directions depending on your garden layout) and a timer which you can program to place on your tap, will only cost around $50 - $80 as a set from your garden center or purchased online.

Soaker Hose ~ $20 From Amazon
~$50 With Timer & Hose Splitter

Drip Irrigation Kit
~ $50 From Amazon

You can program it to come on early morning, and also late evening for a few minutes, to make watering hands free and simply a matter of regular inspection of your bales to ensure everything is being well maintained.

A drip irrigation system has a similar cost, and if you're more water conscience, it might be a better choice for you. It's designed to drip water slowly rather than quickly soak. However there are more fiddly parts with drip irrigation systems, which is why some people prefer soaker hoses.

Either way you'll need to play around with the timing of both (and the pressure of the tap) to ensure your bales are getting as much water as needed, where it's needed.

Fertilization & Plant Health…

If you've followed the advice given when planting (aged manure, followed by good quality rich

compost, and followed by potting mix) that might be enough to sustain your plants (in terms of available nutrients) for the entire season.

It will provide a continual slow release of nutrients.

Although that does depend on exactly what it is you're growing. Some plants are more demanding in their requirements than others.

And keep in mind, a straw bale is a closed environment, so if additional nutrients are required, you'll have to introduce them yourself. Things to keep an out for include…

Leaves Turning Yellow

If older plant leaves are turning yellow before they have fully matured, it's usually an indication that nitrogen is lacking in the growing medium. This can actually be quite a common problem with straw bales, as the microbes inside the bale are using a lot of the available nitrogen to help break down the bale itself.

Leaves Turning Purple

If your plant leaves are turning purple, this is usually a sign of a phosphorus deficiency which plants require to create energy, sugars and nucleic acids and it is more commonly seen in younger plants.

Leaf Edges Turning Brown

If the edges of your leaves are turning brown, called "leaf margin necrosis", this is usually a sign of a potassium deficiency in your bales.

If you're seeing any of these signs, you'll want to do something about it as means your plants are stressed and that will obviously have an impact on the yields of your crops.

In order to fix these problems, you can simply introduce a few handfuls of aged manure mixed with compost into and onto the straw around the effected plant/s.

Although this is more of a slow release technique, so depending on the extent of the problem, you might want something more faster acting.

For that you can find a decent liquid organic fertilizer from the garden store and apply it based on the directions given.

You can also use other organic solutions like blood and bone, fish meal, or wood ash, depending on the specific nutrient you want to introduce to counter the problem.

Worm Tea…

I introduced this idea when we looked at conditioning your bales, and suggested giving them a direct microbial injection to give them a massive head start. It makes sense that if you're going to do something right, you might as well do it from the beginning and keep it up.

Here are just a few of the benefits of using worm tea on your straw bale garden (or in any garden you manage for that matter)…

- Pathogens cannot infect your plants as readily because any potential infection sites on the plants are already dominated and occupied by beneficial microbes.
- Beneficial microbes will have taken and used the available food sources & therefore any pathogens have nothing to feed and grow on.
- Plants are more active, taking up nutrients from the tea and making them less susceptible to attack by pathogens.
- Nutrients and food in the tea encourage good microorganisms to grow.
- When applied to foliage, nutrients are retained on leaves and are released slowly, being available to feed the plant with time. This improves plant health and nutrition.
- Soil structure is improved, with more oxygen reaching into the roots and preventing toxin build up in soil by anaerobic microbes. In our case, the entire ecosystem is positively boosted inside our straw bales.
- Depth of root grow is increased. Stronger roots means stronger plants, with deeper access to nutrients and water.
- Decomposition of dead organic material and toxins are increased.
- Less exposure to chemical fertilizers and pesticides for the soil, plant and you, improving the general health of your entire garden!

That's an amazing list of benefits for something that will only take you 10 minutes to make.

So here's a general worm tea recipe you can use, allowing you to brew as much or as little as

you like (as often as you like).

Worm Tea Recipe

Here's what you'll need…

- Pure Worm Castings (fresh from your own worm farm is best, store brought is ok)
- Cheese Cloth / Paint Straining Bags or similar material.
- Large Bucket or Container
- Water (preferably rain water)
- Aquarium Pump & Air Stone For Aeration.
- Molasses (unsulphured)

Directions…

Take approximately ¼ cup (2oz) of pure worm castings for every 3 liters (1 gallon) of worm tea being brewed. Wrap these in your cheese cloth (straining bags or similar material) and seal with a twist tie. Drop this into your bucket or container.

The size of your container will depend entirely on how much worm tea you want to brew. It might just be a large bucket; it may be a much larger container or water barrel.

Fill your selected container with water.

Add approximately 1 teaspoon of Molasses for every 18 liters (5 gallons) of water. You might want to mix this with a smaller amount of warm water first to help dissolve it properly. This is what will dramatically increase the microbial population as it acts as a food source.

Place your air stone in the container and turn it on to ensure you're putting oxygen into the system.

Leave it brewing for between 12 – 24 hours to ensure maximum extraction of the nutrients and reproduction of the beneficial microorganisms.

When it's ready you can use it in two ways.

The first is to apply it directly into your straw bales, just as you would water them with regular water. This will introduce the microbes deep into the bale and help improve the ecosystem.

If you haven't brewed enough to fully water all your bales, you can dilute it down with additional water to spread it around to make it go the distance.

You can also apply it to the foliage of your plants using a water spray bottle or pressure sprayer.

This will introduce the beneficial microbes directly onto the foliage. It helps so that disease causing microbes cannot attack any potential infection sites (the beneficial microbes

outcompete them), namely the leaf and stem. It will also provide nutrients as a foliar feed.

And again, this isn't something you can "overdo".

Unlike adding too much fertilizer to your garden here we are simply dealing with adding more beneficial microbes – so absolute worst case you'll be introducing more worm food for any worms that also happen to make their home in your straw bales.

So you might like to setup a weekly or fortnightly regime to get brewing.

Once you've got all your materials there, it's literally a 10 minute job to get setup, you can leave it brewing overnight, and it's ready to be used first thing in the morning.

If you want more information about worm farming (the technical name is of which "vermiculture") get yourself a copy of my worm composting book at…

http://www.wormfarmingsecrets.com

Once you introduce worm composting into your gardening practices, you'll be kicking yourself for not doing it much sooner... but it's better late than never!

The difference in plant health when introducing worm tea into your gardening practices

Worms In Your Bales…

Worms are amazing little creatures.

Even if you setup your straw bale on an evaluated concrete patio somewhere far away from the lawn, odds are some worms are going to eventually find their way into your bale.

And the amount of worms a bale contains is a direct reflection on the health of the internal ecosystem of your straw bales. The more worms there are, the healthier the overall ecosystem is. Your plants are going to be happier and your crops will be much more productive.

If you've set your bales up on the lawn, you should find a decent population of worms will have made themselves a home inside, within just a month or so after planting.

This is excellent as the worms will help to aerate the composting straw (improving its ability to compost) and will leave valuable worm castings (which act as a natural, balanced, slow release fertilizer) right throughout the bale.

In order to improve the internal environment faster you can also introduce composting worms directly (a handful per bale) if you wish to. Just be sure to wait at least a week after you've finished conditioning your bales to ensure the bales have stabilized and so they will provide a more favorable environment for the worms.

You can purchase live composting worms from most garden centers or you can buy them online, although that's quite an expensive approach to take.

The better option is to setup your own worm farm so you'll always have a continuous supply of worms and worm castings that you can make use of.

If you are going to acquire composting worms consider getting Red Worms (also known as Tiger Worms), as they are much more efficient at composting than a standard garden worm that might simply find its way into your straw bale (or composting bin).

Again, check out worm farming secrets for everything you could ever want to know about worm composting (and/or to purchase some live composting worms for your garden)

http://www.wormfarmingsecrets.com

Weed Control…

I've mentioned it a couple of times already, but weeds aren't going to be much of a problem.

You might find a few grasses sprout from your straw bales early on (seeds which existed within the bales when purchased), which you can simply pinch out (easily and without fuss).

From then on in, you might get the odd one or two randomly pop up, but you'll find it nothing like managing a traditional garden bed where weeding is a weekly job in its own right.

If you want to make sure you aren't introducing weeds yourself, just make sure any compost you use has been well hot composted to kill any weed seeds it might contain.

You will also want to think about how weeds might grow around your bales.

This won't be a problem if you're growing on concrete, but if you plan on placing your bales directly on the lawn, consider putting some weed cloth down between the lawn and the bale.

It will ensure weeds don't grow up into the bale via the lawn. You should also extend this out and leave a bit of a "skirt" around your bales too, so weeds don't grow around the base.

If you are looking for an organic option, here's a recipe for an organic weed spray that works pretty well. I've used it on occasion to kill all weeds right back before laying weed mat down - on top of which I've then placed our straw bales.

Keep in mind that this is bad news for any plant, including your vegetables, so don't go applying this around anything you plan on growing, and don't use it directly in or on your bales…

All-Purpose Organic Weed Spray

Apply this on a dry day to ensure it has a chance to take hold. Within just a few hours you should start to see your weeds die back.

What you'll need…

- 3 Liters (1 Gallon) of white vinegar
- 2 cups of Epsom salt
- 1/4 cup dish soap
- Water sprayer or pressure sprayer

….simply mix all of the ingredients together into your water or pressure sprayer and apply to the entire foliage of any weeds you want to get rid of. To make this even more effective, poke a wire or thin stake down into the root system through the middle of your weeds before applying.

This will ensure the mixture gets right down into the roots. Otherwise you'll likely find that just the leaves die back (and not the roots) and the weeds will keep growing back. Regardless, you might have to use several applications for this to be really effective.

Really simple ingredients for an organic weed killer – any dish soap will do, preferably organic

Insects & Pests…

Although you might experience a few pests and bad insects, they're going to be substantially less of a nuisance than in a traditional garden. Given the bales are raised, it virtually eliminates ground dwelling insects, and again you've eliminated those that are common to soil as well.

However, you'll always want to keep your eye out and deal with them as necessary.

The best most natural way to achieve this is to follow companion planting tips (both vegetable with vegetable and vegetable with herb). Nature has designed plants that grow well together, others that will specifically attract beneficial predatory insects, and others that will repeal

parasites, so we might as well make the most of those natural relationships.

That's also why it's a good idea to consider planting out the vertical sides of your bales with companion herbs as you're effectively creating yet another natural barrier (other than height) that will help to stop pests crawling up into your bales.

Many herbs actively work to repel common pests for specific varieties of vegetables, and it's just a matter of basic planning and making a simple list of what you're going to plant with what.

If you do find that you're being overrun by any specific insect then you can look for an organic readymade solution at your local garden center, or try a more natural homemade solution.

However keep in mind that if you're going to use pesticides (organic or otherwise), odds are you'll end up killing off a lot of beneficial insects & microbes in your garden as well.

That's why it should always be considered only as a last resort.

If something is impacting just a single plant, and removing it entirely isn't going to upset your overall gardening plans, it's probably best to just pull it and take it on the chin.

However, if you want to try something, here's an organic pesticide option.

All-Purpose Organic Pesticide

Here's a basic all-purpose organic pesticide you can make from common vegetables…

Keep in mind that this isn't designed to specifically kill insects, but to simply make every part of the plant undesirable to live on (or consume). So you'll either starve the insects in question, or drive them off into the neighbor's garden or a more favorable environment…

What you'll need…

- Cooking pot (roughly 2 liters)
- Container or Jug (same size)
- Cheese cloth, tea towel, or other permeable material
- Blender
- Funnel
- Chopping Knife
- 2 Onions
- A Jalapeno pepper
- A Clove of garlic
- Some dish soap
- Water spray bottle with nozzle

Directions…

Fill your pot with warm water.

Chop up the onions, pepper, & garlic with your knife. It doesn't have to be pretty; we simply want to chop them up into smaller pieces that can be easily blended.

Place them in your blender and blend into a smooth paste.

Transfer the paste into your pot of warm water, bring to the boil, then turn the heat right down and let it simmer for around 20 minutes.

Turn the heat off and allow the mixture to cool to room temperature.

Take your empty container or jug and place the cheese cloth (or other material) over the top, and slowly strain your pot containing your vegetable paste into the jug.

Here you're simply trying to remove any larger vegetable pieces that might still exist so we don't later clog up the water spray bottle when we're using it.

Add around two table spoons of dish soap to your now strained mixture.

This will help it to stick to your plants better when applied.

Setup a funnel in your water spray bottle, and slowly transfer the liquid from the container into it.

It's now ready to use, or optionally you can store it in the refrigerator for up to two weeks (if you do store it, be sure to give it a good shake before you use it).

Simply apply the spray everywhere you have an infestation. On the plant foliage (top and bottom of leaf), the plant steam, and around the base of the plant.

Again, this won't directly kill any insects; it simply makes the environment highly unpleasant for them. So you'll need to treat the plants every 4 – 5 days for a couple of applications to kill off (starve) the pests and prevent any newly hatched baby insects that have hatched since then from sticking around.

Also keep in mind that you should only apply this when the sun is out and the plant or plants in question are going to remain dry for several hours so it has a chance to take effect. Otherwise rain and / or watering afterwards is simply going to wash it away.

End Of Season

At the end of the growing season there's one thing you're going to have a lot of, and that's a whole bunch of partially decomposed straw bales!

There are a couple of things we can do with these to put them to good use, and there are also some other considerations you might like to think about in preparation for the next growing season (as I've got no doubt you'll be hooked on straw bale gardening after your first season).

Composting…

Depending on how many straw bales you've used in your garden, it definitely makes sense to turn as many of them as possible into rich and valuable compost.

And if you already compost, you should find this pretty painless, and relatively easy.

The bales themselves will have already composted internally by about 80% as it is.

You can use traditional compost bins to do this.

Simply break your bales up a bit with a garden fork and add them into your bins with some aged horse manure and other any other vegetable organic matter. Mix well and aerate regularly.

And although making compost might be a little time consuming and require regular attention for turning over to aerate, it certainly makes sense to do this.

It means you won't have to purchase any additional compost for subsequent growing seasons. You can simply use this as your growing medium for the top of your bales next season, so you'll not only save money, but you'll also know exactly what it contains.

If you've got more straw than a traditional compost bin can handle (depending on the size of the garden you created) then you might like to also consider constructing an open air composting operation somewhere in your garden.

Google is definitely your friend when it comes to designing one of these.

There are countless means to do so, and the main advantage here is that you can compost a lot more than you might otherwise be able to.

They are also much easier to access so you can get right in there to turn the whole thing over

rather than having to dig around inside a traditional bin from the top down.

For example one of the more common DIY bins can be constructed with old wooden pallets.

These are ideal as the natural spacing between the individual planks within the pallets will provide excellent continued air flow for your entire compost pile.

Mulching…

An alternative is to use the remaining spent straw bales as a standard garden mulch. We generally do this in addition to regular composting - assuming there is enough straw left over - and there usually is.

For example, once your traditional garden beds are done for the season, you can break up the

bales with a garden fork, and place a thick layer over your entire garden bed.

If you try to make this layer around 20cms (about half a foot) thick, it will suppress all weeds that may grow in the traditional bed over winter, and it will continue to slowly decompose.

Come spring time, you can then work this layer of straw deep into your soil before planting, to really help improve soil conditions. Any straw that has yet to fully decompose will do so over spring providing a great source of slow release nutrients for your plants.

Assuming you still want to manage a traditional garden bed as well that is ;-0

Getting Next Seasons Bales…

I mentioned earlier on that (depending on where you live) the price of straw bales can be very seasonal. They tend to be much cheaper when there's a lot of straw that's recently been harvested by wheat farmers.

So you're naturally going to pay a lot less when there is more supply around (right after harvest) as opposed to at the end of winter.

As a result, you might want to consider making the investment in next season's bales now. There is no harm in purchasing your bales a season before and storing them over winter.

Autumn & Winter…

I've mentioned "next growing season" quite a lot throughout this guide, and you might have made the assumption that we're only talking about Spring / Summer – but the truth is, you can garden in straw bales over winter, growing winter crops, just as well as you would grow them in a traditional garden bed. The considerations are largely the same.

Just make sure you plan your straw bale acquisition and conditioning process appropriately so you've got your timings right for autumn planting.

The only other thing you'll want to pay close attention too is how wet the weather becomes and therefore your straw bales too.

If there is an extremely long period of rain, it's possible that your bales could become extremely water logged, potentially triggering off an anaerobic environment – something we definitely don't want. So keep that in mind if you plan on growing winter crops too.

Feedback

I hope you've enjoyed this guide to straw bale gardening & found it useful.

I've purposely tried to keep it as concise and to the point as possible and I hope I've achieved that. But if you feel like I've left anything out, if anything is unclear, or if you have any questions in general, please feel free to drop me an email.

This is the first edition of the guide, and any feedback you send in will certainly help to improve the next edition of the book.

I would also love to hear how your own straw bale garden adventure is going, and see any photos you might take of your journey as well.

Here's wishing you all the best with your gardening adventures…

Duncan Carver

Duncan Carver

admin@strawbalegardeningbook.com

http://www.StrawBaleGardeningBook.com

Image Credits

Root Simple – http://www.rootsimple.com

100th Monkey Mushrooms - http://www.100thmonkeymushrooms.com/

Bonnie Plants - http://www.bonnieplants.com/

Grow and Make - http://www.growandmake.com/

Home Made Is Easy - http://www.homemadeiseasy.blogspot.com

Learning & Yearning - http://www.learningandyearning.com

Home Grown - http://www.homegrown.org/

Smart Gardener – http://www.smartgardener.com

Urban Gardens Web - http://www.urbangardensweb.com

Feed Fayetteville – http://www.feedfayetteville.org

Walter Reeves – http://www.walterreeves.com

Other images sourced locally and via the Wiki Commons https://commons.wikimedia.org