## Straw Bale Gardening Basics

**Easy access** is one benefit of gardening in bales. Straw bales vary in dimension, but the 20-24" height makes planting and harvesting easier. For anyone with a bad back or other disability that makes getting down on the ground difficult, the straw bale's raised height means everyone can enjoy gardening.

**Bad soil or no soil…not a problem-Bales can sit on any surface** because the plants root into the bales.

**No weeding** is one of the biggest advantages of straw bale gardening. Since clean straw has very few weed seeds in it, the bales will not sprout weeds.

**"Conditioning" the straw prior to planting** is an important part of the process. Nitrogen fertilizer and water are used to encourage the bacteria growth inside the bales; this begins to decompose the straw inside the bale and turns it into "soil" that allows the newly planted seedlings to thrive. This

conditioning schedule is conducted over a 12 day period-see table to left with sample temperature range over 12 days. >>>>>>>>

**Bales decompose** after heating up early in spring when nitrogen is added. The heat generated inside the decomposing bales acts like a heater in a greenhouse. The bales, once wet, can get up to $150^0$ inside, but after 10-12 days they will cool down to under $100^0$ and can then be planted. Each spring fresh bales are required to take advantage of this heating and cooling process.

**Mice/Voles aren't an issue** as they tend to find the wet, hot and

decomposing straw very inhospitable for living quarters, and straw has almost no food value.

**Potted seedlings can be planted directly** into the bales. Or, if planting with vegetable seeds, then a 1-2" coating of clean, weed seed free, potting mix spread over the surface of the bale is required to form a seed bed. Once planted, it is easy to cover the bale with 3 mil polyethylene plastic, tucking it under the bale strings on the sides, and feeding the poly over the first wire stretched 10" above the bale surface. This makes a little "straw bale greenhouse," enabling the seeds to sprout and grow rapidly. Besides holding in heat from the decomposing straw below, the poly tent also keeps heavy spring rains from washing away the tender seedbed, and keeps rabbits or deer from eating the new seedlings.

**Tomatoes, potatoes, pumpkins and cucumbers** are just some of the hundreds of vegetable crops that grow extremely well in the straw bales. Use the resulting compost the following spring to mulch perennials, enhance existing garden soil, spread around trees and shrubs, or to fill containers for patio flowers.

To learn more about straw bale gardening, visit www.strawbalegardens.com or www.facebook.com/LearnToGrowAStrawBaleGarden. or http://extension.wsu.edu/benton-franklin/wp-content/uploads/sites/27/2013/12/Straw-Bale-Gardening.pdf

# Conditioning Schedule

| | | |
|---|---|---|
| Day 1 | 1/2 cup 26-0-0 | Water to saturation |
| Day 2 | Skip | Water to saturation |
| Day 3 | 1/2 cup 26-0-0 | Water to wash in fertilizer |
| Day 4 | Skip | Water to saturation |
| Day 5 | 1/2 cup 26-0-0 | Water/warm is best |
| Day 6 | Skip | Water/warm is best |
| Day 7 | 1/4 cup 26-0-0 | Water/warm is best |
| Day 8 | 1/4 cup 26-0-0 | Water/warm is best |
| Day 9 | 1/4 cup 26-0-0 | Water/warm is best |
| Day 10 | 1 cup 16-16-16 | Water to wash in fertilizer |
| Day 11 | Skip | Water |
| Day 12 | Skip | Ready to plant |

| CONDITION DAY | Outside Temp High | Outside Temp Low | BALE Date | SNAIL Temp (F) |
|---|---|---|---|---|
| 1 | 55 | 50 | 20-Apr | 80 |
| 2 | 62 | 46 | 21-Apr | 82 |
| 3 | 59 | 51 | 22-Apr | 94 |
| 4 | 55 | 50 | 23-Apr | 100 |
| 5 | 53 | 44 | 24-Apr | 100 |
| 6 | 55 | 41 | 25-Apr | 118 |
| 7 | 55 | 44 | 26-Apr | 116 |
| 8 | 51 | 46 | 27-Apr | 116 |
| 9 | 57 | 46 | 28-Apr | 128 |
| 10 | 55 | 50 | 29-Apr | 134 |
| 11 | 57 | 41 | 30-Apr | 118 |
| 12 | 80 | 44 | 1-May | 112 |

# Do not confuse straw with hay or grasses.

Straw is the baled-up dead plant stems of a grain crop. It has had virtually all its seed heads removed, and contains no leaves or flowers. It is a fairly inert material, Ph neutral, no nutrients, with a similar chemical make-up to wood. It does not decompose easily, usually requiring the addition of nitrates to do so. Hay, on the other hand, is grass baled up green, with lots of feedstuff (leaves, flowers, etc.) deliberately left in there because it is fed to animals. It readily decomposes, unlike the dead plant stalks of straw.

Straw bale gardening is good for growing flowers, herbs and vegetables, and recommend using straw rather than hay. Yes, there is a difference: The straw has hollow stalks, which helps for several reasons, including distribution of moisture and nutrients.

The book “Straw Bale Gardens” by Joel Karsten suggests allowing at least 4 feet of space between rows, to allow for accessibility. Also, it says to place the bale “cut side” up This book should be available in your local library.

The bales undergo “conditioning” in order to decompose the interior of the straw bale. Conditioning involves adding “nitrogen-rich materials such as coffee grounds, fresh compost, aquatic plants, fertilizer etc.”

Conditioning takes roughly two weeks and requires watering frequently. See condition table on reverse.

Straw bale gardening plants directly into in the bales. The conditioning helps make space for the soil and plants, as well as increases fertility and moisture.

“Fertilizer and water are the chief ingredients used to condition the bales,” according to the book. “Conditioning doesn’t’ mean that the bales will be completely composted in 12 days. … It simply means the bales will have composted far enough that the bacteria inside is activated and has begun to digest the straw, making nitrogen and other nutrients available.”

After 12 to 18 days, what now exists inside the straw bales is a nutrient-rich, slightly composted organic media that is much warmer than surrounding air and soil temperatures as it is still ‘cooking.

You can easily check the temperature can be checked by inserting a food thermometer into the bale.

You just want to see that it is cooking. If it gets above 100 degrees, the microbial process is taking place.

It’s difficult sometimes to dig out the straw to make a hole, but the straw dug out from the bale can also be used for mulch or added to a compost bin.

After digging holes, you can plant the seedlings according to the package directions.

In addition to planting on the top of the bale, plants can be grown in the side of the bale. Mushrooms will be growing along around the bales and it is just showing microbial activity is taking place,

Benefits:

Lack of weeding because there’s minimal soil.

Like a raised bed garden, it is easier to reach for those who have trouble bending.

Straw bale gardens don’t require as much work as in -ground gardens, which often need soil amendments, among other things.

The straw bales typically last only a few seasons; afterward, the straw — which is mostly composted — can be spread as mulch.it is a composted mulch, put into a traditional raised beds, plant potatoes etc., as it is rich in nutrients and soil microbes.

In my 1st year (2015) I did 2 bales at the YBLG lighthouse project and 6 bales at my home garden here in Newport, OR. In 2020 I did 20 bales and this year back to 10*. *(originally written for LCMG monthly newsletter)*

-Michael Christy Lincoln County Master Gardener