

STRAW BALE GARDENING

STRAW BALE: NATURE'S PERFECT CONTAINER

- I. Gardening options:
 - A. Traditional – down and dirty
 - B. Raised Beds with soil mix/media
 - C. Containers with soil mix/media
 - D. **Straw Bales**

- II. The bales: Straw, NOT hay
 - A. Hay will have a lot of weed seeds
 - B. Note that some big box straw retailers sell “super compacted” bales. These are too compacted for our purpose. The average 2-string farm bale is 18 in wide, 16 in high, and 32-48 in long. A dry bale will weigh about 45 lbs.

- III. Straw Bale Advantages
 - A. Instant garden in **any** sunny location (at least 6 hours per day)
 - B. No worries about soil type or fertility, limited soil depth, slope
 - C. Raised planting bed
 - D. No cultivation or digging
 - E. No weeding (some grass from wheat straw may sprout as you wake up the bales during conditioning – cut it and use it in your smoothies, pull it, wipe it with white vinegar, or just leave it)
 - F. No worries about crop rotation – a fresh start each season
 - G. Avoids soil borne pathogens and overwintering insects
 - H. Conditioned bales warm up faster to allow earlier planting
 - I. Less cost
 - J. Low water usage
 - K. Challenges those pesky rabbits

- IV. Disadvantages – Hmmmm – depends on your point of view
 - A. Used bales need to be removed

- 1) However, this “composted” material is a great mulch for your shrubs and perennials, or a great addition to your compost bin
- B. You start new each gardening season
 - 1) However, the other gardening methods require new season processes like soil testing, adding amendments, light tilling, weeding, consideration for crop rotation, etc.
- C. Some may consider transporting the bales a disadvantage
- D. Mushrooms and slime mold if you think they’re icky – naturally occur on the bales and are not harmful (it’s actually a sign that your bales are going through the healthy composting process as planned).
 - 1) The mushrooms are not edible. If you don’t like them on the bales, just knock them over or pull them out (wear gloves since they’re messy)

V. GET STARTED:

- 1) Make your plan
 - a) Select your garden location - Typically a sunny location, unless you are growing crops that like a little cool shade – straw bales make your garden setup portable!
Ready access to a source for watering is important.
 - b) Layout the space of your selected location and determine number of bales. **NOTE:** a 20 bale garden will keep a family of four in produce for the season. Scale that up or down to meet your production goal.
 - c) Decide what to plant in the space available
You can plant veggies **and** flowers (don’t plant corn-too tall, rhubarb, Strawberries, or asparagus-perennial)
Note 1: Don’t forget that you can plant the sides of the bales too!
Note 2: Plant an “indicator plant” or two on top of the bale to visually signal the need for watering. Impatiens (red will be most visible) are great for this as they have shallow roots and tend to get droopy if the roots get dry. You can monitor from a distance....maybe from your easy chair 😊

- d) Make a planting diagram. If adding soaker hose, put this in your diagram.
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- 2) Get your bale(s) and place them cut side up, strings on the side
WHERE:
 - a) On the ground – use ground cloth, cardboard, or other material under and around your bales for ease in maintenance (Note: if you have a known gopher problem you can put down chicken wire first)
 - b) On the edges of your concrete, blacktop, or gravel driveway
 - c) On your concrete patio
 - d) On your beautiful wood deck **NO!!!!** The moisture will damage it.
 - 3) Purchase fertilizer to condition the bales **before** planting
NOTE: Allow approximately 2 weeks for this process (see Exhibit A for conditioning process)
 - a) Chemical Fertilizer: 29-0-4 inexpensive lawn fertilizer, 1 pound per bale (NO weed and feed!); and 10-10-10, 1 cup per bale
 - b) Organic fertilizer: Milogranite, Blood Meal, or other organic mixtures, 3 pounds per bale
NOTE: The three numbers on the fertilizer bag are its content analysis. 29-0-4 would be 29% nitrogen (N), 0% phosphorous (P), and 4% potassium (K). Look for at least 20% nitrogen to ensure that the bacteria in the bales are activated quickly. Make sure the nitrogen is NOT slow release.
 - 4) Purchase potting soil (do not use soil from the traditional garden or yard, etc. – sterile soil is the key to no soil borne pathogens). The amount will be determined by how many bales, how much “sheet” planting for seeding, and pocket planting for plants or larger seeds.
 - 5) If you haven’t already.....purchase your seeds and/or plants as shown on your planting diagram.

VI. Planting in your conditioned bales:

- a) **Sheet planting for seeds:** water top of bale, spread potting soil 2-3 inches deep, plant seeds as directed on seed packet, spread thin layer of potting soil on top, **shower** lightly with water.
- b) **Pocket planting for plants and larger seeds:** Pry a pocket open the depth and size needed for the plant or seed, add potting soil, place plant/seed at proper depth. Space properly. Water lightly so you don't wash out soil.
- c) **Side Planting:** This can be a little tricky. If planting plants, I like to leave a side of the peat pot on to support the soil and plant in the bale. Don't plant horizontally. Try to orient the plant at an upward angle with the section of the peat pot at the bottom. If your plants aren't in a peat pot, you could substitute a piece of cardboard (which will compost) to aid in securing the plant. Watering the side plants can be done by sticking the spout of a watering can or by using the garden hose on "jet" into the straw above the plants. The water will soak down.

VII. Watering – Don't forget your indicator plants!

Watering is key. The soil will dry quickly in our hot southern sunshine.

If you planted indicator plants, you will know when the bales are thirsty. But then, there's always the poke your finger into the bale test (ouch).

Once plants are established with their root systems reaching deep into the bales, watering needs will reduce.

But....**GOOD NEWS**....you cannot overwater a straw bale. So, adding automatic watering with soaker hose can be a great benefit. Let it run long enough to soak down to your side plantings. Soaker hose should go in before planting. **NOTE:** It's always best to water your plants at the base rather than over the top of the plants to help eliminate fungal diseases from water sitting on the leaves. Morning is the best time to

water so any water on the leaves will have a chance to dry before evening.

VIII. Fertilizing – an application of liquid or soluble fertilizer every few weeks during the growing season such as Miracle Grow or liquid fish fertilizer will be very beneficial. Do not fertilize very small seedlings. Wait until they have their third leaf pair before fertilizing.

IX. Pests/disease – Yup....bugs will find your luscious plants.

Stay alert! The best way is to check daily (who doesn't like to stroll through their garden masterpiece), and pluck the various and occasional beetle or caterpillar off and dispose of them. If it's the caterpillar of the swallowtail butterfly on your dill....please let them stay 😊

All plantings are subject to disease. Many are eliminated with straw bale gardening. You may experience powdery mildew in our hot humid weather, maybe blight. Be prepared to recognize these and treat them quickly.

If you have a serious insect/disease problem, contact your local extension office for help identifying and selecting an appropriate solution.

X. Other stuff –

- A. Make it your greenhouse to start early and extend your season
- B. Build a trellis for vertical gardening
- C. Tent to eliminate birds and pests eating your luscious goodies
- D. Getting tipsy (your bales, not you) – shore up with wood sides held in place with stakes.
- E. Stacking bales to increase growing space (sides, of course). Yes, you can! Stager them for more stability.
- F. Plant again the same season! After the harvest of an early crop of peas, radishes, etc. plant a second crop in that space....with your extended growing season....maybe a third crop!

- G. Go to your favorite gardening source to learn about your selected plantings (i.e. are they cool season crops or do they love heat, are they disease resistant, how much space do mature plants need, etc.)**

Exhibit A – CONDITIONING YOUR STRAW BALES***

- I. Place your bales as planned (they are difficult to move once conditioned, as they may fall apart....like Humpty Dumpty, you will not be able to put them together again)

***Credit for these conditioning schedules goes to Joel Karsten's Straw Bale Gardens

- II. HERE WE GO.....**TRADITIONAL FERTILIZER (next page for Organic)**

DAY 1 – ½ CUP FERTILIZER; WATER TO SATURATION

DAY 2 – NO FERTILIZER; WATER TO SATURATION

DAY 3 – ½ CUP FERTILIZER; WATER JUST TO WASH IN FERTILIZER

DAY 4 – NO FERTILIZER; WATER TO SATURATION

DAY 5 – ½ CUP FERTILIZER; WATER TO WASH IN FERTILIZER**

DAY 6 – NO FERTILIZER; WATER**

DAY 7 – ¼ CUP FERTILIZER; WATER**

DAY 8 – ¼ CUP FERTILIZER; WATER**

DAY 9 – ¼ CUP FERTILIZER; WATER**

DAY 10 – 1 CUP 10-10-10 FERTILIZER; WATER TO WASH IN FERTILIZER**

DAY 11 – DO NOTHING DAY

DAY 12 – READY TO PLANT IF YOU STICK YOUR HAND IN AND THE BALE IS NICELY WARM ---**NOT HOT** – REMEMBER THIS CONDITIONING PROCESS HEATS THINGS UP!

NOTE: FERTILIZER IS TO BE SPRINKLED EVENLY OVER THE TOP OF THE BALE.

** IF YOU HAVE ACCESS TO WARM WATER AT THIS POINT, IT SPEEDS UP THE PROCESS

Exhibit A (con't)

HERE WE GOORGANIC FERTILIZER

DAY 1 – 3 CUPS FERTILIZER; WATER TO SATURATION

DAY 2 – NO FERTILIZER; WATER TO SATURATION

DAY 3 – 3 CUPS FERTILIZER; WATER JUST TO WASH IN FERTILIZER

DAY 4 – NO FERTILIZER; WATER TO SATURATION

DAY 5 – 3 CUPS FERTILIZER; WATER TO WASH IN FERTILIZER**

DAY 6 – NO FERTILIZER; WATER**

DAY 7 – 1 ½ CUPS FERTILIZER; WATER**

DAY 8 – 1 ½ CUPS FERTILIZER; WATER**

DAY 9 – 1 ½ CUPS FERTILIZER; WATER**

DAY 10 – 3 CUPS FERTILIZER WITH Phosphorous (P) AND Potassium (K,
WATER TO WASH IN FERTILIZER**

DAY 11 – DO NOTHING DAY

DAY 12 – WAIT 5 MORE DAYS FOR THE MAGIC TO HAPPEN. THEN,
IT'S READY TO PLANT IF YOU STICK YOUR HAND IN AND THE BALE IS
NICELY WARM ---**NOT HOT** – REMEMBER THIS CONDITIONING PROCESS
HEATS THINGS UP!

NOTE: FERTILIZER IS TO BE SPRINKLED EVENLY OVER THE TOP OF THE
BALE.

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Exhibit B – Resources

Book: **STRAW BALE GARDENS** by Joel Karsten (Cool Springs Press)

Internet: www.strawbalegardens.com
 <https://extension.tennessee.edu>

ETC!!!

Facebook: Straw Bale Gardening
 Learn to Grow a Straw Bale Garden

There are hundreds of sites for Straw Bale Gardening.

I take the advice of University sites FIRST.

Then, I scour the other sites for experience based ideas.

You will see a number of opinions on the conditioning process. I don't believe any of them are wrong. Consider the source of the information and decide for yourself.

ENJOY YOUR NEW GARDEN!

NOTES:

FIVE BALE GARDEN: Layout and Suggested Plants

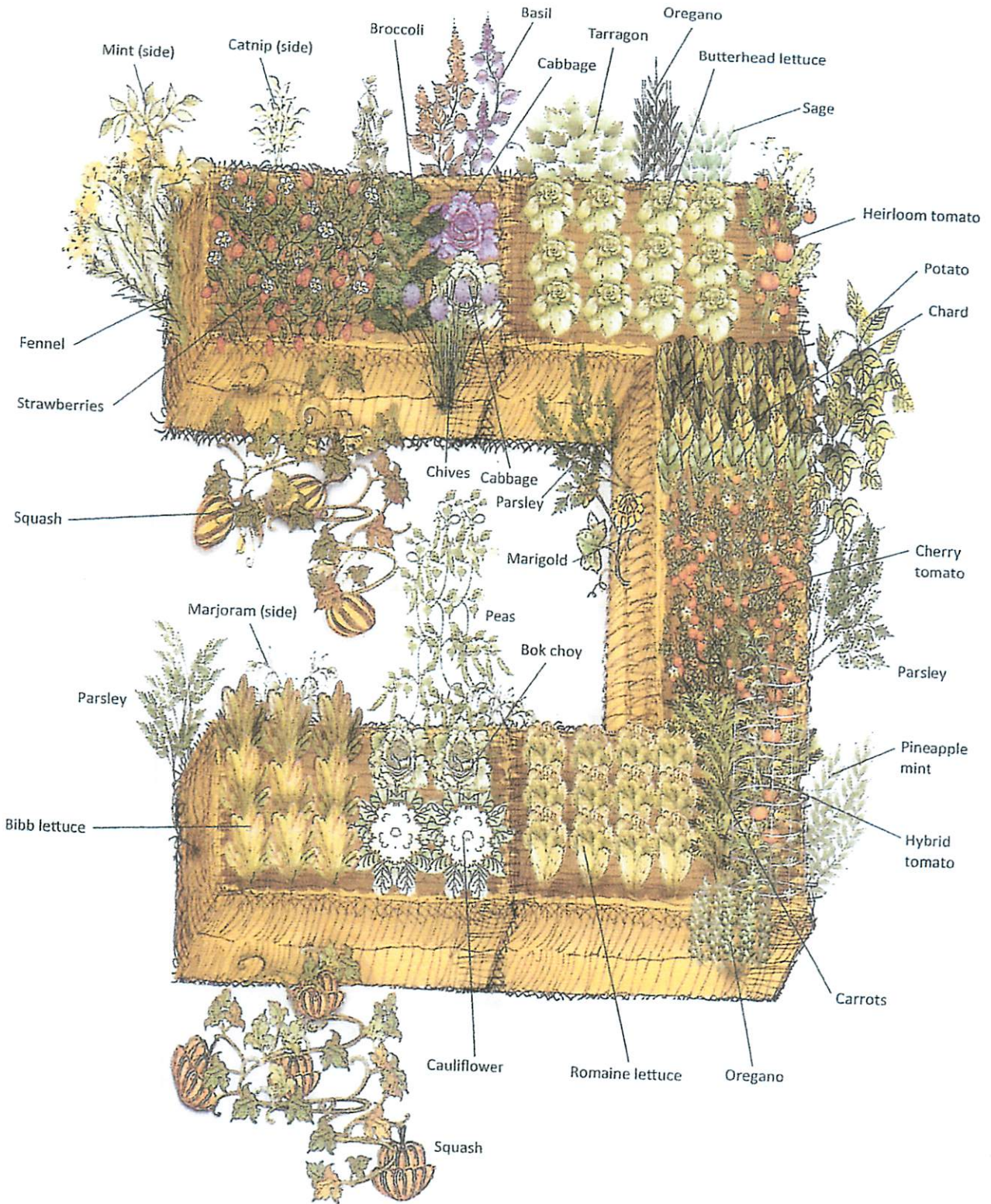


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