

Bale Gardening 101



Baled It

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Supplies

- Bales (oat, wheat, or grass; do NOT use pine straw)
- Easily and efficiently accessed water source
- A high nitrogen fertilizer
 - We use Miracle Grow All Purpose Plant Food (a synthetic fertilizer with 24% nitrogen)
 - Organic fertilizers can be used...HOWEVER, we strongly suggest NOT using organic fertilizers because:
 1. They produce an AWFUL smell that can affect a large area
 2. They are typically more expensive than synthetic fertilizer
 3. They have less % nitrogen
- A 10-10-10 (or higher) phosphorous and potassium (P and K) fertilizer
- Desired plants (from seed is difficult and takes longer, but possible)



Bale Conditioning Schedule Summary Chart

Day in Process	Synthetic fertilizer	Water
Day 1	½ cup	Enough to wash/dissolve fertilizer into bale
Day 2	SKIP the fertilizer	Just enough to saturate bale
Day 3	½ cup	Enough to wash/dissolve fertilizer into bale
Day 4	SKIP the fertilizer	Just enough to saturate bale
Day 5	½ cup	Enough to wash/dissolve fertilizer into bale
Day 6	SKIP the fertilizer	Just enough to saturate bale
Day 7	¼ cup	Enough to wash/dissolve fertilizer into bale
Day 8	¼ cup	Enough to wash/dissolve fertilizer into bale
Day 9	¼ cup	Enough to wash/dissolve fertilizer into bale
Day 10	1 cup of 10-10-10	Just enough to saturate bale
Day 11	SKIP the fertilizer	Just enough to saturate bale
Day 12	PLANT TODAY	Water new plantings

*chart reproduced from *Straw Bale Gardens: Complete* by Joel Karsten

What does a plant need?

1. Light
2. Water
3. Carbon dioxide and oxygen
4. Nutrients

How are these needs met?

1. The Sun, grow lights, etc
2. Rain, irrigation, etc.
3. Air
4. Potting soil, the ground, etc...or a conditioned hay bale

How does the conditioned hay bale provide nutrients?

- Hay bales have all the nutrients that plants need...
EXCEPT FOR nitrogen
 - Note: Most of the air on Earth is composed of nitrogen gas (N_2), but plants can't use it in that form.
 - Conditioning the bales provides a source of nitrogen
 - The process takes just under 2 weeks and essentially forces the inner core of the bale to compost
 - After conditioning, you can plant directly into the bales

BEFORE CONDITIONING

You must decide where to place the bales.

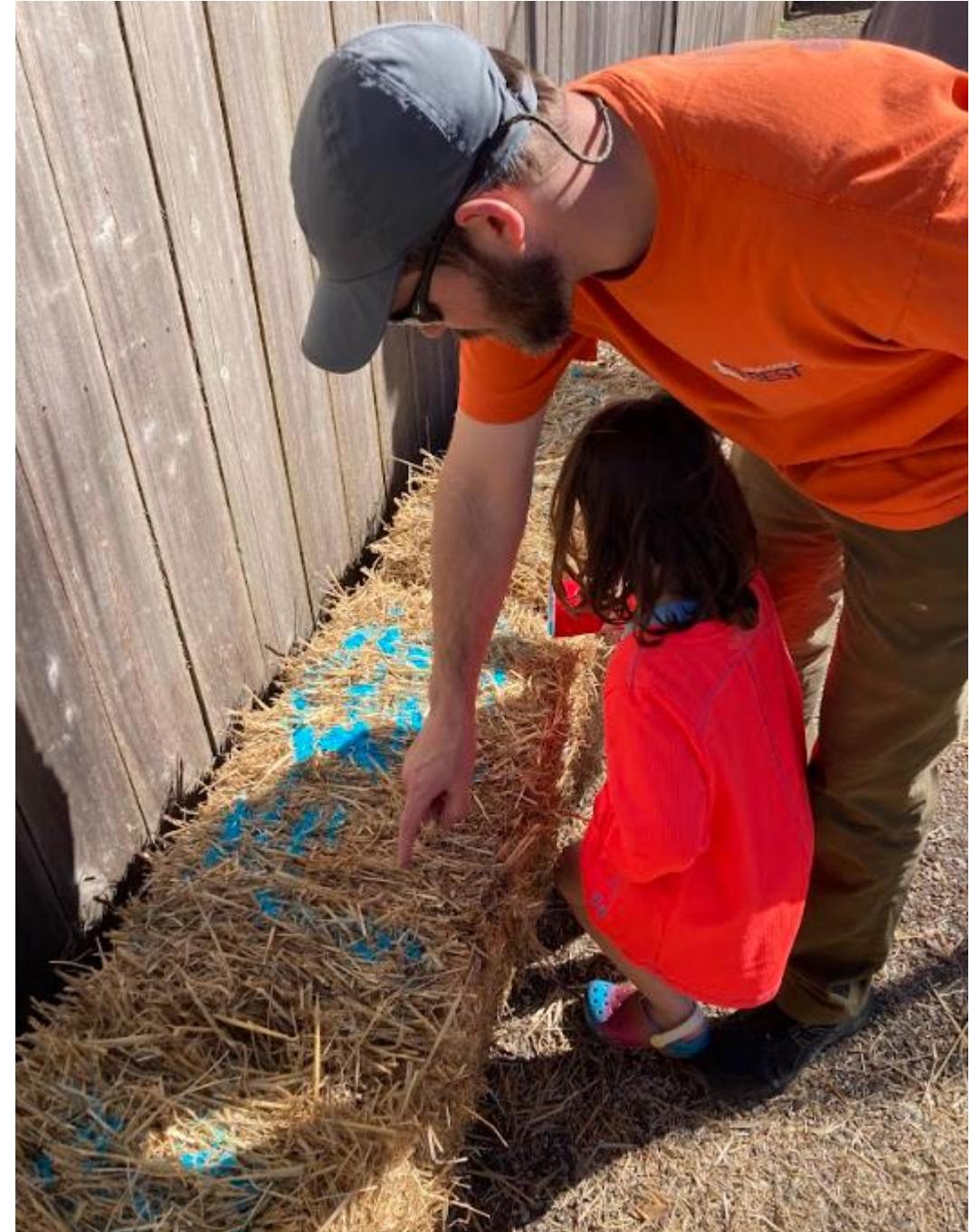
PLACE THEM:

- In a location where they will get enough sun, but not be scorched
- on just about any level surface (e.g. grass, dirt, concrete, etc.)
- **MAKE SURE** that the twine that holds the bales together is on the side
- Easy/efficient access to water to suit your specific needs



How do you “condition” bales?

- 12-day schedule (next slide)
- Apply fertilizer to the top of the bales
 - Spread evenly, avoiding the outer one or two inches
- Wash the fertilizer into to the bales



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June 12, 2022

66 days

September 16, 2022



July 3, 2022

36 days

May 28, 2022



April 20,
2024

47 days

June 6, 2024



Don't worry if:

1. "Mushrooms other plants I didn't put there are growing!"

That means it is working! If you wish to pull unwanted plants, you can.

But if you pull mushrooms, you are fighting a losing battle. They will stop popping up after a week or two and shouldn't harm you or your pets as long as they are not eaten.

2. "Lizards are crawling on my bales!"

This is good! They are your bale guardians!

3. "Bugs are crawling around inside the bales!"

Not all bugs are bad, and the ones that are inside your bale are good.

We discourage the use of pesticides. If you see bugs ON your plants, try to identify them or ask someone to identify them. They might be helpful bugs that eat harmful bugs. (ex: wasps, assassin bugs, lady bugs)



Other Tips & Tricks

- You can start a bale garden almost anywhere, even on an asphalt or concrete surface.
- First bale garden? You may discover some time into your experience that you wish you would have placed them somewhere else. It is very difficult to move a conditioned bale...unless from the start you placed it on something that is movable, like a wooden pallet lined with chicken wire and landscaping fabric



Other Tips & Tricks

- After a few days of conditioning, the inner core of the bale should be quite warm due to the activity of the nitrogen-fixing bacteria. Stick your hand in to the middle to see. This warmth in the core of the bale will also keep the roots warm, which will allow you to plant a little earlier than everyone else before the last frost.
- If placing a bale garden on any noticeable slope, turn the bales so that the shorter ends of the rectangle are facing uphill and downhill. You may think that they won't roll on your hill/incline, but as they begin to break down over time they will slump and begin to "roll" in slow motion down the hill and look like a collapsing cake.

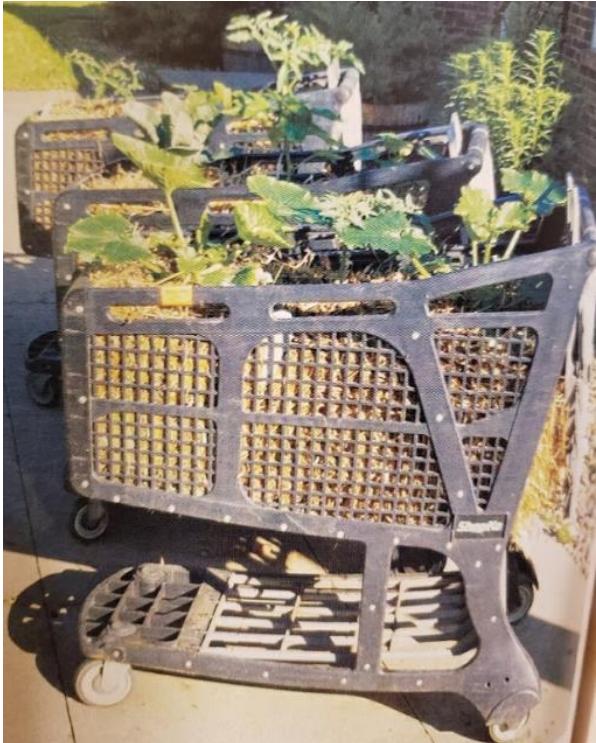
Other Tips & Tricks

- Bales will deteriorate and begin to lose their shape after a few months. Eventually, they will not be held together by the twine anymore. But the leftover bale is still good to use for container planting! Collect it and reuse it in pots or planters!
- If placing a bale garden on any noticeable slope, turn the bales so that the shorter ends of the rectangle are facing uphill and downhill. You may think that they won't roll on your hill/incline, but as they begin to break down over time they will slump and begin to “roll” in slow motion down the hill and look like a collapsing cake.



Other Tips & Tricks

- Get creative!
- Can you grow a photo booth?
- How mobile can you make your garden?



Useful Resources

- (books) STRAW BALE GARDENS Collection by Joel Karsten
 - *Straw Bale Gardening: A complete guide to growing in bales without soil or weeds*
 - *STRAW BALE GARDENS: The Breakthrough Method for Growing Vegetables Anywhere, Earlier, and with No Weeding*
 - *STRAW BALE SOLUTIONS: Creative Tips for Growing Vegetables in Bales at Home, in Community Gardens, and Around the World*
 - *STRAW BALE GARDENS Complete*
- (book) *Vegetable Gardening in the Southeast* by Ira Wallace
- The Urban Farm Podcast (on Spotify or wherever you get your podcasts)