



Garden Notes

GN 160

STRAW BALE GARDENING

WHY GROW IN A STRAW BALE?

- Less labor involved
- Raised height
- No weeding
- Extends growing season
- Holds moisture well/less watering
- No crop rotation
- No soil-borne diseases or pests
- Minimal tools required
- Can be located anywhere

HAY VS. STRAW

<i>Hay</i>	<i>Straw</i>
<ul style="list-style-type: none"> • Usually baled grass or alfalfa • Costs more than straw • Contains seed heads that can sprout • Usually green • Used for livestock feed • Does not have the water-holding capacity of straw 	<ul style="list-style-type: none"> • By-product of small grains (oats, wheat, rye, barley, flax) • Seed heads are harvested for grain • Yellow or gold in color • No nutritional value (usually used as bedding material for livestock) • Hollow stems wick water efficiently

SETTING UP A STRAW BALE GARDEN

- Bales can be placed on most surfaces; a wooden deck needs protection from damage.
- Site should have a minimum of 6 to 8 hours of sunlight each day.
- North-to-south orientation preferred.
- Twine/strings should be on the side of bale (not on the top and bottom).
- Cut side of straw should be on the top of the bale if possible.
- Steel "T" posts; 14-gauge electric fencing wire or concrete reinforcing wire for trellis; 2'x4' lumber (if using wire trellis).
- Soaker hose, drip irrigation, or "shrubblers" for irrigation.

CONDITIONING BALES

- Process takes approximately 2 to 3 weeks (depends upon fertilizer used).
- Can use synthetic or organic fertilizers.
- After each fertilizer application, water into the bale thoroughly (warm water is best).

FERTILIZERS

<i>Synthetic</i>	<i>Organic</i>
<ul style="list-style-type: none"> • <u>Nitrogen (N) source:</u> lawn fertilizer with at least 20% nitrogen (no herbicides; not slow release) • <u>Phosphorus (P) and potassium (K) sources:</u> garden fertilizer (10-10-10; 16-16-16; etc.) 	<ul style="list-style-type: none"> • <u>Nitrogen (N) sources:</u> such as, blood meal, feather meal, fish emulsion. Nitrogen sources should contain at least 5% nitrogen. • <u>Phosphorus (P) and potassium (K) sources:</u> bone meal (P), fish meal (P); kelp meal (K)

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CONDITIONING SCHEDULE (amounts below are *per* bale)

	Synthetic Fertilizer	Organic Fertilizer	Water
Day 1	½ cup nitrogen	3 cups nitrogen	Water to saturation
Day 2	Skip	Skip	Water to saturation
Day 3	½ cup nitrogen	3 cups nitrogen	Water to wash in fertilizer
Day 4	Skip	Skip	Water to saturation
Day 5	½ cup nitrogen	3 cups nitrogen	Water, warm is best
Day 6	Skip	Skip	Water, warm is best
Day 7	¼ cup nitrogen	1½ cups nitrogen	Water, warm is best
Day 8	¼ cup nitrogen	1½ cups nitrogen	Water, warm is best
Day 9	¼ cup nitrogen	1½ cups nitrogen	Water, warm is best
Day 10	1 cup 10-10-10	3 cups with P and K	Water to wash in fertilizer
Day 11	Skip	Skip	-----
Day 12	Plant today	Wait 5 more days (plant on day 17)	Water any new plantings

PLANTING BALES

- Lay irrigation line down the center of the bale before planting.
- If air temperatures are cool, tent a 2 to 3 mil thick sheet of polyethylene over bale and trellis to protect newly-planted seeds and seedlings.

Transplants:

- Use hand trowel to open up area in bale for inserting seedling.
- Fill in with planting mix around seedling root ball.
- Water well.

Seeds:

- Mound planting mix over entire top of bale (over irrigation line).
- Tamp down so mix is 1 to 2 inches thick.
- Plant seeds into planting mix at recommended spacing.
- Water well.

IMPORTANT:

- Apply fertilizer monthly to the plants when they start growing well. Use a liquid or water soluble synthetic fertilizer, or use an organic fertilizer such as fish emulsion or kelp.
- Water when the bale feels dry inside (use your finger to test moisture).
- As the bales shrink, keep the twine taut so bales stay under compression.

RESOURCES

- *Straw Bale Gardens*, Joel Karsten, 2013, Cool Springs Press, ISBN: 978-1-59186-550-6
- *Straw Bale Gardens Complete: Breakthrough Vegetable Gardening Method*, Joel Karsten, 2015, Cool Springs Press, ISBN: 978-1-59186-907-8
- Author's website: www.strawbalegardens.com
- Author's Facebook page: <https://www.facebook.com/learntogrowastrawbalegarden>
- "Straw Bale Gardening", Washington State University Extension Fact Sheet FS109E
<http://cru.cahe.wsu.edu/CEPublications/FS109E/FS109E.pdf>