Straw Bale Gardening
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What is straw bale gardening?

• It’s a gardening method of raising vegetables, herbs, and flowers planted directly on a straw bale
• You can also use hay, alfalfa, oat, or rye bales
• Straw is more common and generally cheaper and has less weed seeds
• Bales bound with poly twin work much better than bales with jute
Advantages?

• Bales are 2 feet tall, which makes them more accessible for gardeners who have trouble bending over
• The garden isn’t permanent and can be moved
• Used bales can be used as mulch or composted
Advantages

• NO DIGGING!!!
• Poor or no soil not a problem
• Bales can be placed on pavement
• An inexpensive way to make a raised bed
• Less weeding
• Less soil disease problems
Disadvantages

• Requires more watering
• Time conditioning the bales
• Fertility can be an issue
• Bales may not hold up the entire season (twine)
• Depending on bale source and number needed can be expensive
Source/Cost of Bales

- Can be obtained from local farm stores
- Best method, directly from a farmer, generally will be cheaper too
- Average cost for just a few bales $5.00 each
- Choose bales with poly twin that are baled tight
- You don’t need grade A bales
Getting Started

- Bales have to be conditioned before planting
- Be sure bales are turned so that the cut end of the straw is pointing up, this allows water and fertilizer penetration
- Make sure the bales are where you want them, after they get wet they are very heavy!
Bale Conditioning

• Water the bales daily for three days to make sure water penetrates thoroughly
• Keeping the bales wet is very important
• On days 4, 5, and 6, sprinkle the top of each bale with ½ cup of urea and water in each time...or use a water soluble fertilizer at the label recommended rate...you can also do a variation of this.... 19-19-19
• Organic options include: 2 cups of blood meal, fish emulsion, compost/manure tea (may take 2-3 weeks for bale to heat up and cool down with this option)
Bale Conditioning

- Days 7, 8, 9, cut the amount of fertilizer applied in half and continue to water daily
- On day 10 stop adding fertilizer but continue to moisten the bales daily
- Day 11, feel the top of the bale for heat, an easy way is to push a meat thermometer into the bale.....if its over 99 Degrees F....continue to keep the bales moist until the temperature comes down
- Generally bales are ready to plant around day 12
Planting Methods

• Pockets or Holes: Create pockets or holes in the bale by removing straw
• Fill the holes with potting medium or compost….I like medium with fertilizer already added which will give your plants a boost
• The number of holes depends on what crops you plant (more on this later)
Planting Methods

• Flat straw bed: Spread potting medium or compost on top of the bale...3-4 inches is enough

• In both methods the planting medium is essential to get the plants off to a good start so they can root into the bale
Seeding and Transplanting

• Transplants or seeds can be planted with either method
• Flat beds work best for seeding things like lettuce, beets, and radish etc. that will have closer spacing
• Larger seeded plants like watermelon, cucumber, zinnia, and sunflower can be planted with either method but pockets or holes saves potting medium
• With transplants the pocket type works best, it gets the roots down in the bale for a good start
Planting Guide

• The number of plants a bale can support depends on the ultimate size of the plants and the length of time they take to mature
  • Tomatoes: 2-3 plants
  • Peppers: 4 plants
  • Squash: 2-3 plants
  • Zucchini: 2-3 plants
  • Vining melons an cucumbers: 4 plants
  • Broccoli, Cabbage, Cauliflower: 4 plants
  • Smaller plants such as radish, beet, lettuce etc. plant like you would in the soil (follow packet directions)
Keeping The Bales Upright
Watering

- Watering is the key to success on straw bales, water runs through the bale quickly
- Soaker hoses can be used but water must drip right against the plant
- Manual sprinkling works best but avoid wetting the leaves
- Milk jugs with small holes can be filled and sat next the plants, water will drip out slowly and water the plants
- It would be very difficult to over water plants in straw bales
Fertilization

• Adequate nutrition is critical to success in straw bale gardening
• Nitrogen gets tied up in the bale and can become low as will phosphorus and potassium.....water once per week with a water soluble fertilizer
• Signs of nutrient deficiency:
  yellowing leaves = nitrogen deficiency
  Purpling leaves = phosphorus deficiency
  brown edging of leaves = potassium deficiency
Weed Control

• Very little!
• If you use wheat straw there will be some wheat seed germination but it is easily pulled out
• If using hay there will be a lot more weed seeds that will grow from your bale and later it will be in your compost or mulch
• Avoid using compost or manure unless you know it is weed free
Pest Control

• Ground dwelling pests such as grubs, cut worms, fusarium and verticillium wilt we be little to now problem
• Bales are generally used only one season and helps to keep pest life cycles disrupted
• Still have cabbage worms though!
Placement of Bales

- Depends on what you grow...sun for sun loving plants, shade for shade loving...or tiered
Season Extension?
Recycling Bales

• In Kentucky bales will last only one season but you can get more than one crop in on a particular bale
• Used bales can be used as mulch or composted for future use
• Avoid using bales for mulch around the same plant families that were growing in them previously
Another Approach.....Raised Bed Two Seasons and For Water Savings
Resources

http://strawbalegardens.com/blog/
http://cals.arizona.edu/cochise/waterwise/pdf/Workshop_series/Straw_Bale_rwh_gardening.pdf