

Growing Inside the Box: Raised Bed Basics



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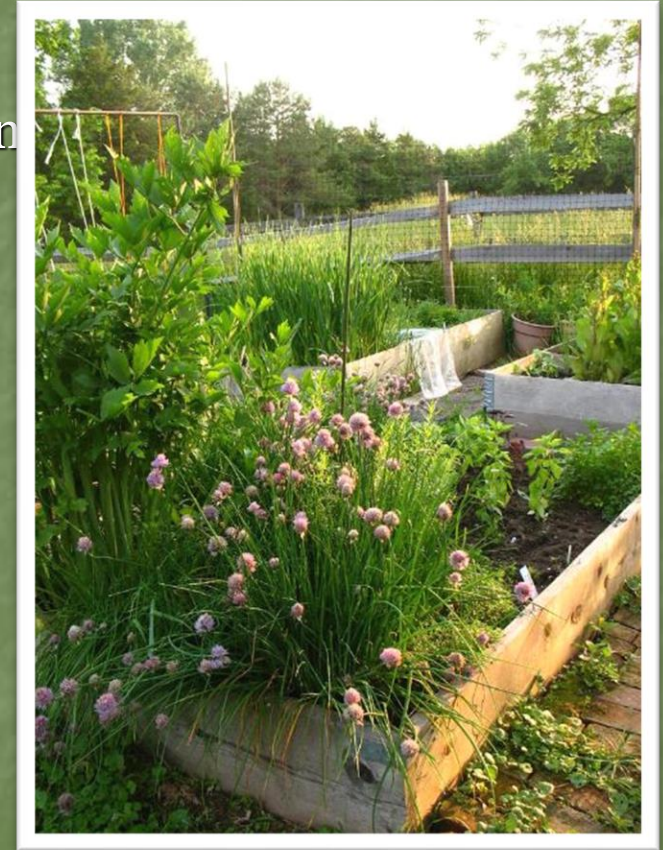
Advantages of Raised Beds

- Maximize available space
 - Typically smaller than traditional gardens, more convenient option in areas with limited space.
- Solution for challenges such as clay soil or slopes.
- Filled with high-quality soil mixes that have large amounts organic matter, which improves drainage & may increase yields.
- Tend to drain better & warm up quicker, allowing for faster seed germination & transplant growth.
- Higher soil levels & improved soil quality offering
- better access, less maintenance, & easier harvesting
- Dense planting techniques result in higher
 - production per square foot of garden
 - Helps reduce weed seed germination
 - It's easier to control diseases & pests.



Disadvantages of Raised Beds

- Elevated beds dry out more quickly in the hot summer months.
 - Increasing need for supplemental watering
- Frame & soil materials can be expensive.
- Limited rotation of crop families.
- May lead to increased soil-borne disease and nematode problems.
- Increased plant density may increase some pest concerns.
- Not well suited to vining or sprawling vegetables such as watermelons.



Location & Layout

- As with any garden site, a raised bed should be located in full sun for best production.
 - A minimum of 6 to 8 hours of direct sun is required for most vegetables & flowers.
 - Expect less-than-optimum production & leggy plants if full sun is not available.
- The bed should also be located in a convenient location near the home & a water source.
 - Regular irrigation is necessary for raised beds.
- Site on north/south axis or east/west, but NOT on diagonal.
 - If trellis added, run on west side
- Stake out location with garden twine.
 - Remember paths between beds.
 - Paths should accommodate wheelbarrows, wheelchairs & other equipment.
 - Use mulch or a thick layer of gravel to discourage weeds.



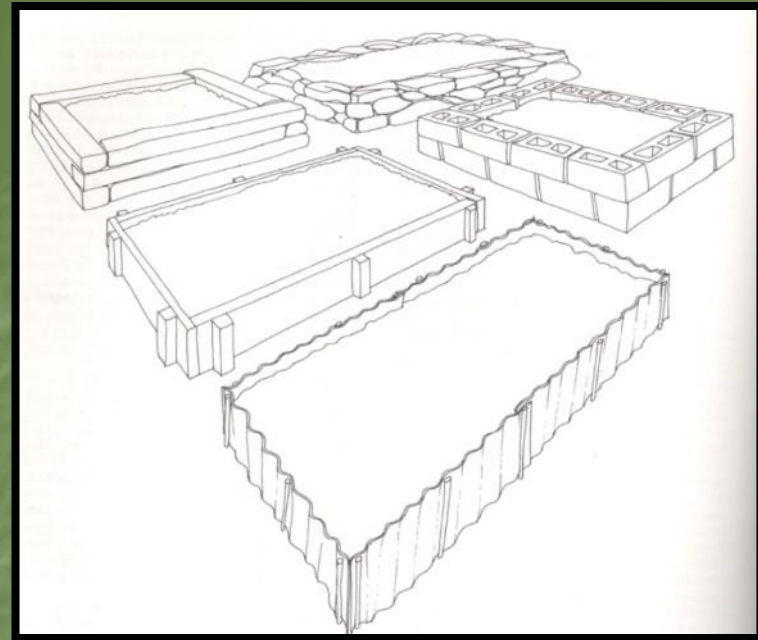
Location & Layout

- If building on a slope, level the boxes to create stability and balance, reducing soil erosion & nutrient loss.
- Wait until a storm before you fill it, then check for drainage issues.
- You may need to relocate.



Materials

- Raised beds can be made just by mounding the soil...but these beds require a lot of maintenance.
- Most gardeners prefer to use framing materials to contain the new soil:
 - If wood products used, should be treated with wood preservative to increase the life of the structure.
 - Can use concrete blocks to construct raised beds
- Materials for building a raised bed can vary greatly from inexpensive to expensive.
 - Depending on the frame materials & growing media used, one can spend as little as \$30 or as much as \$275 for a 4' × 4' × 12" raised bed.
 - Construction for a 4' × 8' × 12" raised bed with twice the growing space can cost anywhere from \$50 for a frame & soil to \$515.
- Use newspapers &/or cardboard to smother any weeds or grass not removed by hand or with a sod cutter.
 - Do not use plastic on the bottom of the beds as this will hinder drainage.



Material & DESIGN OPTIONS



Wood 2x4 or 4x6

FOR A MORE TRADITIONAL LOOK
LEAST EXPENSIVE



Cinder Blocks

FOR AN 'INDUSTRIAL-CHIC' LOOK
LEAST EXPENSIVE



Mortared Stone

FOR A MORE FORMAL LOOK
MOST EXPENSIVE



Steel

FOR AN 'INDUSTRIAL-CHIC' LOOK
MOST EXPENSIVE

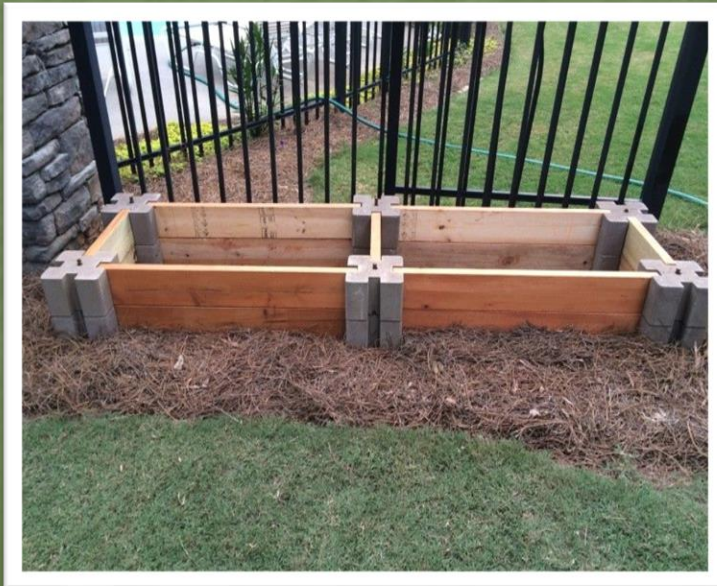
Size

- Depends on the gardener & can vary based on need
- Ideally, frames range in size from 4 × 4 feet to 4 × 12 feet.
 - 4-foot width preferred to allow for easy reach from either side without gardener stepping into the bed, keeping soil compaction to a minimum
 - If only from one side, no more than 30 inches wide
 - The length of the bed can vary depending on type of construction materials used & available space
 - A bed 4 to 12 feet in length is suitable for most home gardens.
- A soil depth of 8 to 12 inches is desirable as this will allow for improved drainage & adequate root development to produce healthy plants.
 - Beds may be higher & deeper for better access but require more soil or a porous bottom for adequate drainage.



Planter wall blocks

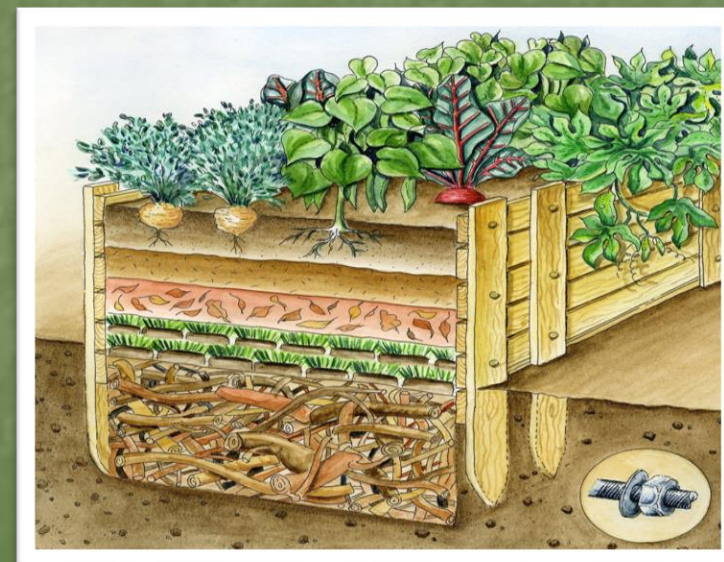
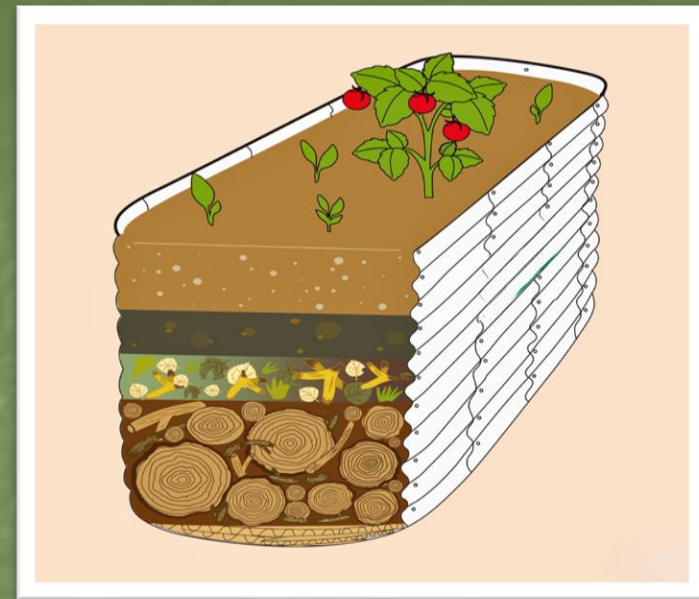
- Inexpensive and immediate.
- Stack and connect with 2x6 wooden boards.
- Unlimited design possibilities.





Layered raised beds

- When soil breaks down it increases nitrogen.
- Encourages earthworms and beneficial insects.
- Retains moisture and promotes aeration.



Soil Mixes

- Top soil amended with organic matter.
 - 1 part top soil
 - 1 part organic matter (peat, compost, composted manure)
 - 1 part porous material (vermiculite or perlite)
- When buying pre-made get “container” mix.
- Adjust pH as recommended by a soil test.
- Layer according to size of bed to avoid soil compaction.
- Continue to add soil as it breaks down over time.



Planting Dates for Zone 8a

- Average last day of frost 4/15

- You might be able to plant a raised bed garden a little earlier than a conventional garden because raised beds warm up more quickly in the spring.

- By using mulches & row covers, you could plant as much as 2 weeks earlier than a traditional garden.

- Average first day of frost 10/31

- Row covers can also extend your harvest later into the fall & early winter.

April				
SUN	MON	TUE	WED	THU
	1	2	3	4
7	8	9	10	11
14	15	16	17	18

Plant Spacing

- For a truly productive raised bed garden, the gardener must relearn many aspects of planting.
 - **Gone are the long straight rows & wide spacing between rows.**
- Raised bed gardens use space more efficiently to maximize production.
- Block planting, or squares, with proper spacing between plants, is used to optimize yield.
- Staking or caging the plants will allow for the highest plant density.
- Trellises & other structures can be made to let vine crops & other plants grow up instead of sprawling.



Efficient Use of Space



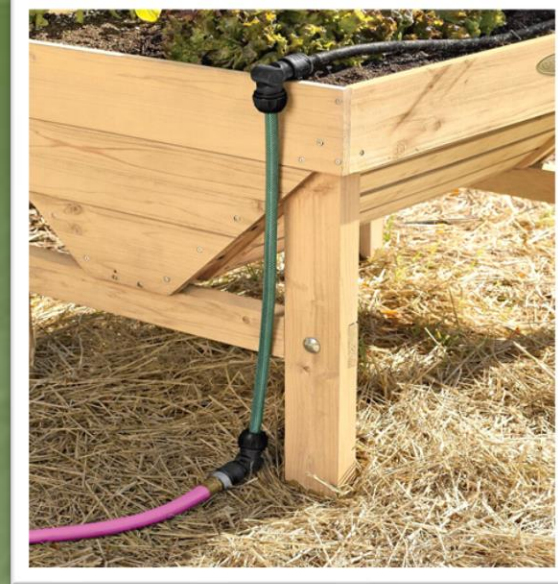
- Succession planting & interplanting
 - Succession planting = Plant all same-season crops in one area so that when they finish producing they can be replaced by another crop:
 - Cool-season lettuce, spinach, radishes, & other leafy crops in one area then replant with beans, cucumbers, or some other warm-season crop after the first crop
 - Interplanting = planting compatible crops to use empty bed space:
 - Plant peppers or tomatoes between rows of onions. By the time the onions are harvested, the other plants will just be reaching a large size.
- Trellises for vining crops
- Do not overlook fall & winter gardening
 - Most crops that produce well in the spring months will do much better in the fall (e.g., broccoli, cauliflower, cabbage, carrots, rutabaga, collards, turnips).

Fertilization

- Fertilization needs of raised bed garden similar to traditional garden
 - Based on crop requirements
- For soils based largely on the natural topsoil, start with a soil test
- If commercial soil mixes used, mix likely contains adequate fertilizer for the first few months of the bed
 - Afterward, apply per soil test results or 10-10-10 at rate of 1/3 cup per 4 × 4-foot bed
- Amendments such as composts, rotted manures, bone meal, blood meal, fish meal, & cottonseed meal can be used



Watering



- Raised beds require more frequent watering than traditional plantings.
 - Check the soil & water whenever it is dry, about 2 to 4 inches deep. This could require up to 2 inches of irrigation water per week if it doesn't rain.
- If watering by hand, water the soil, not the leaves.
- Drip irrigation offers many benefits, including less water & more efficient water use. Look for DIY kits.
- Soaker hoses also option.
- After garden's first year, soil mix begins to hold more water as organic matter gradually composts & turns into humus.
 - could need less irrigation as the native soil improves & plants grow deeper roots.

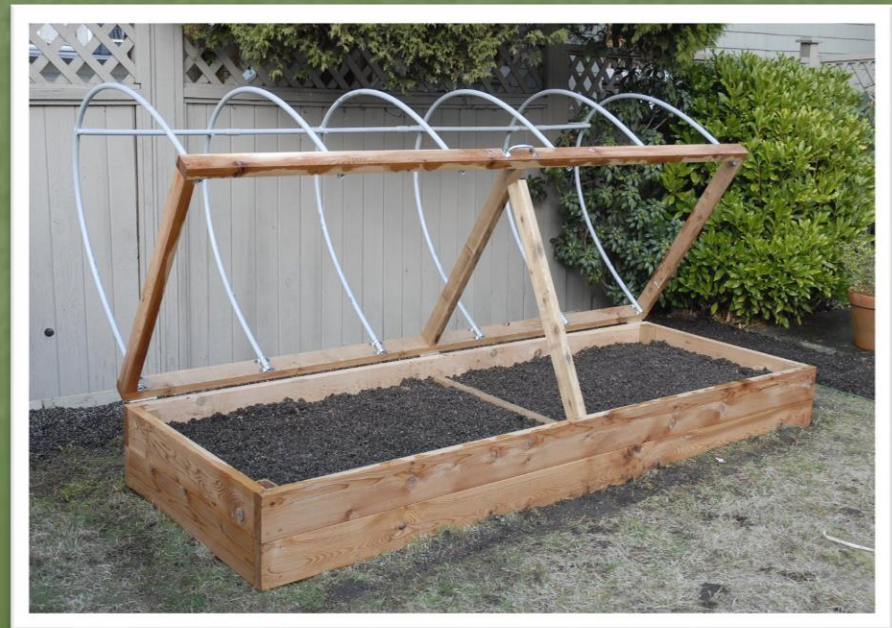
Mulches



- Apply mulches such as pine straw or bark nuggets around plants to help conserve moisture, cool the soil, & control pesky weeds.
 - Apply a 2- to 4-inch layer around young & emerged plants, & over the soil after it has warmed.
 - Do not apply too early which might keep the soil cool & slow the growth of warm-season crops.
- Old newspapers and cardboard can also be recycled & used as free & biodegradable mulch
 - Layers of newspapers & cardboard can be placed down prior to adding other mulch.
 - In a year, the newspaper will break down, adding valuable nutrients back into the soil.

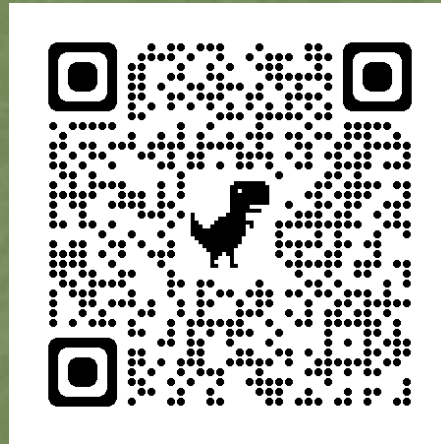


Some Ideas



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<https://www.waltonmastergardeners.com/ppt-pdfs>



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Free Spring 2024 Garden Talks

Mondays 2:00–3:00 p.m.
O’Kelly Memorial Library
363 Conyers Road, Loganville GA

- Feb 26: Growing Inside the Box—
Raised Bed Basics**
- Mar 4: Managing Plant Disease**
- Mar 11: Spring/Summer Veggies**
- Mar 18: Totally Tomatoes**
- Mar 25: Plant Choice Matters—
Gardening with Native
Plants**



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Walton County Master Gardeners invite you to
Free Spring 2024 Garden Talks

Tuesdays 4:00-5:00 p.m.

W.H. Stanton Memorial Library
407 W. Hightower Trail, Social Circle GA

**Feb 27: Growing Inside the Box—
Raised Bed Basics**

Mar 5: Managing Plant Disease

Mar 12: Spring/Summer Veggies

Mar 19: Totally Tomatoes

**Mar 26: Plant Choice Matters—
Gardening with Native
Plants**



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Free Spring 2024 Garden Talks

Wednesdays 2:00–3:00 p.m.

UGA Extension Office

1258 Criswell Rd SE, Monroe GA

**Feb 28: Growing Inside the Box—
Raised Bed Basics**

Mar 6: Managing Plant Disease

Mar 13: Spring/Summer Veggies

Mar 20: Totally Tomatoes

**Mar 27: Plant Choice Matters—
Gardening with Native
Plants**



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Questions?

Contact us at
waltonmg@uga.edu
770-267-1324



Walton County Extension
1258 Criswell Rd SE
Monroe, GA 30655
M-F – 8 AM to Noon/1PM to 5 PM

Help Desk Hours – Tuesday 1 to 4 PM

Visit our booth at the Farmers' Market for
help with gardening questions.

Don't forget to fill out the evaluation and let us
know what classes you would like to see next year!



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WaltonMG2024



[Read our blog on Soil3](#)





Master Gardener Fundraiser

Plant Sale

Walton County
Extension Campus
1258 Criswell Road
Monroe, GA
April 20, 10-2



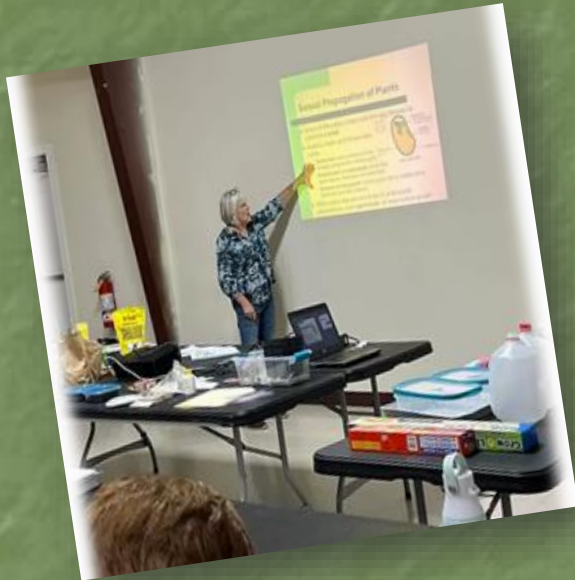
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Rain or Shine



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