



Raised Garden Beds Class

1. Building a Raised Bed

Pros:

- Great for small spaces
- Ideal for those with poor soils
- Great for sloped yards
- Controlled environment
- maximized space
- Cleaner, easier to control weeds and pests
- Can be used year after year with minimal maintenance costs

Cons:

- Dries out faster
- More expensive starting cost
- Mistakes can lead to higher costs to fix

2. Orientation, Sizing

- Typical bed size is about 10' x 3' x 1'-1.5'
- 2' tall or less is ideal, most beds range 12-18" tall
- Can be as long as you want, but must be reinforced about every 4-6', more if a weaker material is used
- Usually about 3' wide, any more and it becomes hard to maintain the middle
- N to S is generally better to place your beds, but other directions can work as long as the vegetable placement is properly planned.

3. Types of Wood

- Cannot be pressure-treated if intended use is for produce
- Most ideal wood is cedar but it can be expensive
- Cedar pickets are a cheap alternative but they must be reinforced

Suitable bed materials:

- Cedar wood (best)
- Redwood
- Cedar, fir, pine (not as long-lasting)
- Rocks (natural, not treated)

- Cinder blocks
- Straw bales
- Cob

Unsuitable Bed Materials:

- Pressure-treated wood
- Brick
- Galvanized metals
- Any material coated or treated with unsafe chemicals

4. Soils

- To help cut costs, fill up to ½ of the bed with leaves, and light brush. Then, top them off with soil.
- Mix compost into the soil to offer an organic way to add nutrients. Commercial fertilizers are not necessary with proper compost.
- Find your soil type (sandy, loamy, clay) and research how to amend each type to maximize your yield. Grow with your land, not against it.
- Learn your N-P-K levels, and amend as needed.
- Micronutrients are just as important as the main nutrients. Many plants can have proper N-P-K levels and still suffer due to lack of Calcium, Iron, Manganese, etc.
- The perfect level of soil texture to achieve is Loamy soil, a dark, rich soil that easy to work with and retains water and nutrients well
- Step 1 in gardening is: test your soil!

	Clay	Sand	Silt
Pros	Attract and hold nutrients, drought tolerant	can grow more desert/ mediterranean crops/ root vegetables, high drainage, high aeration	Retains moisture, fertile, good aeration
Cons	Compacted, poor drainage, reduced aeration, hard to work with	Leaches nutrients fast, dries out, less support for plants, acidic	erosion
Amend	Gypsum, sawdust/ grass clippings, organic matter, cover crops, sand, perlite	Organic matter, peat moss, manure, vermiculite	Organic materials

Composts to use:

- Homemade compost from veggie or fruit scraps, coffee grounds, egg shells
- Mushroom compost

- Black Cow
- Happy Frog- Fox Farm products
- Animal Manures- rabbit can used directly on beds

Composts not to use:

- Homemade compost that contains any meat or cooked products
- Horse, cow, or chicken manure cannot be use directly- it must be aged or diluted- great for fall prep.
- Raw wood

Soil Additives:

- Perlite (increases air pockets)
- Vermiculite (maintains soil moisture)
- Worm Castings
- Organic Soil Conditioners (for boosted nutrients)
- Gypsum (to break up clay along the bottom of the bed)
- Soil Sulphur (lowers pH)
- Lime (raises pH)
- Blood Meal (organic Nitrogen)
- Bone Meal (organic Phosphorus and Calcium)

5. Mulching

- Mulch the tops after plants are placed or sprouted properly to maintain water moisture. Do not use wheat straw that contains grass seed! Do not use dyed mulch or mulch from infected wood.
- Mulching cannot be done as bed prep as seeds will have trouble germinating unless you are planning to transplant sprouted plants into the bed
- Do not mulch thicker than 4". 2" is usually standard.
- Mulch can be incorporated at the bottoms if the bed to serve as a weed barrier and to break down into organic material over time

What to Use:

- Wood chips- from non-diseased trees
- Non-dyed mulch
- Straw- without seeds
- Aged sawdust
- Pine needles

6. Trellising

- Trellising is a great option to maximize spacing
- Trellises must be positioned correctly to optimize growth
- If placed incorrectly, plants will compete for sunlight and nutrients
- Plan to build your trellis before anything is planting, preferably when creating the bed
- North side trellises are optimal placing

Types of Trellis Systems:

- A-frame trellis- easy to DIY, easy to install
- Cattle panel/Wire panel Trellis- harder to make DIY, sturdier and longer lasting
- Arch trellises- maximized yield, cannot build in a way that blocks sunlight to other plants or prevents easy access into your garden.
- String Trellis- easiest and cheapest to make, least support, least longevity, great for beginners
- Ladder Trellis- usually premade, great decor

7. Irrigation

- Irrigation is essential to preparing a bed. When planning a bed space, plan how it will be watered above all else.
- Do not solely rely on watering by hand, you will severely underestimate the time and energy it will take in the summertime, as well as the heat! If you want to mulch heavily and rely on rain or hand-watering, have a backup plan!
- Having an irrigation system on a timer is ideal and time-saving

Types of irrigation:

- Overhead irrigation- sprinkler systems
- Drip/soaker hose
- Irrigation hoses and spray heads

8. Electroculture- how to

- Electroculture is a wonderful tool to use in the garden with many benefits, such as: pest control, reduce disease, increase crop size and yield.
- Copper is the primary metal used for this due to its electromagnetic and anti-rust properties
- Copper pipes must be placed in the 4 corners of your bed or garden space, or 2 if using a smaller space.
- A smaller piece of copper pipe can also be placed in container gardens/plants as well
- Have a floppy shrub or fruit tree in your yard? Stake it with copper instead of wood and see it grow rapidly this season.

Steps:

1. Secure copper pipes in the ground at each end of your garden space
2. Wrap a smaller gauge copper wire around one copper pipe starting from the top down to the bottom. Cut the top end of the wire so that it sticks up a few inches above the top of the pipe like an antennae
3. Run the wire down into the soil by several inches, more if you can.
4. Connect it to the opposite pipe and begin wrapping it around the pipe starting from the bottom to the top this time.

5. Finish wrapping and cut the end the same at the other pipe with a few inches left sitting above the pipe.
6. Fill in your dirt, cover the wire, and plant like normal.

9. What to Grow

Things to consider before planning your garden:

- How long each plant will take to harvest
- Companion Planting- what can't go together
- How tall each plant gets- will it shade out other plants?
- How much a plant spreads- will it eventually take over?
- What can you rotate between spring/summer/fall?
- Different Light/Water Needs- What needs more/less sunlight or water than another plant? Group like with like.

Best Plants for Raised Beds	Worst Plants	Middle Ground
Leafy greens	Corn	Potatoes
Herbs	Okra	Carrots
Strawberry	Wheat	Cauliflower
Squash/zucchini	Asparagus	Broccoli
Peas	Celery	Butternut squash
Cucumber	Berry bushes	Melons
Peppers	Mint	Bush beans
Tomatoes	Yarrow	Turnips
Onions	Lemon balm	
Garlic	Sweet potatoes	
Leeks	Pumpkin	
Pole beans	Dill	

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