UMass Extension

CENTER FOR AGRICULTURE

Raised Beds

Growing a home garden can help reduce your weekly food budget. Soaring costs for fresh produce, coupled with a problematic economy, make the idea of growing your own food appealing. For some, it can become a real necessity. For others, homegrown vegetables simply taste better. Also, gardening can be one of the best forms of exercise.

One of the ways to simplify maintaining a garden is to create raised beds for your vegetables and fruits. The quantity of vegetables that can be grown in 40 square feet - a bed 4 feet wide by 10 feet long – will provide salads, greens and tomatoes for an entire season. Five beds of this size can yield 300 pounds of vegetables and soft fruits in a 4 – 6 month growing season, which is about what the average person in the U.S. consumes annually.

Advantages of Raised Beds

Most gardeners find that raised beds promote better plant growth and are easier to maintain. Walking in a garden causes soil compaction, which can interfere with drainage and oxygen availability to plant roots. It's also more difficult to weed when soil is compacted. The structure of soil in raised beds can be enhanced and will become loose and friable over time – perfect for plant health. More plants per square foot will grow well and yield more abundantly. You can plant, weed and harvest without ever walking on the soil.

You can also devise easy ways to attach row covers and hoops over raised beds to extend the growing season into fall and to get an early start in the spring.

Raised beds can be filled with high-quality soil, and it's easy to add compost, fertilizers and organic matter. You can water more efficiently. Because raised beds warm up early in the spring and stay warm later in the fall, gardeners can plant earlier and harvest later into the fall. Long-rooted plants, such as carrots, grow especially well in this stone-free environment and, if you want to devote space to them, invasive plants such as mint and horseradish can be confined in raised beds.

Gardeners most appreciate the ease and convenience of maintaining raised beds. They are excellent for people with back problems and others whose flexibility is limited. For people in wheelchairs or with disabilities, and for those who don't want to spend the summer on their knees in the garden, they're a necessity.

Raised beds ultimately eliminate rototilling each year and consequently conserve organic matter in the soil. Usually the beds need just a once-over with a garden fork, or a cultivating tool, then a rake, to incorporate new compost and fertilizer and they're ready for planting. You can avoid stepping on the soil by placing a "digging board' – a wide board you can stand or sit on – across the bed. The board distributes your weight and reduces compaction.

Making a Raised Bed

The initial investment in time and materials to make your first raised bed will vary, depending on how you choose to do it. Ultimately, the time you will save over its years of use will repay the initial investment many times over. Start with one bed, see how you like it, and plan to make more next year.

Choose a location, shape and size.

First, choose a sunny location and decide on the size and shape you want. Think about how far you will want to reach to the center of the bed. Plan to access it from each of the long sides. Generally, beds are made three or four feet wide. Alternatively, in a small space such as against a fence, make a narrower bed that you will access from one side. First strip the grass or turf from the area, or layer wet newspapers over the sod to smother it. Or, to provide additional room for root development, consider cultivating the soil with a digging fork or rototiller before establishing the bed.

Construct the frame with a nontoxic building material, such as stone, cinder blocks, bricks, untreated wood or fiberglass. Some garden centers and catalogs now offer raised bed frames that snap together and can easily be taken apart.

Make sure the frame is between 12 and 16 inches high (or higher if accessing from a wheel chair) and is sturdy enough to hold together when filled with soil. If you use boards, secure them at the corners with metal braces, or use screws or nails to secure the boards to a reinforcing block of wood inside the corners. You can also drive posts into the ground to brace the boards at the corners, as wells as every 3-4 feet, on the outside of the box. Do not nail or try to fasten screws into the ends of the boards - they will split. Boards 2-3 inches thick will last much longer than 1-inch boards.

Fill the frame with a good-quality lightweight soil mix and add a generous amount of compost. Avoid using soil straight from the garden. It is usually too heavy and doesn't allow for proper drainage. If you *do* use your own soil, amend with dampened peat moss, sand and/or compost to make your own mix. Depending on the quality of your soil, a mix of about 50% soil and 50% compost (or a 50% compost/sand/leaf mold/peat mixture) should provide a reasonable start.

A well-constructed raised bed will last for years, and soil fertility can be improved and maintained by adding organic matter in the form of compost, or by cover cropping and turning the resultant green manure into the soil. Raised beds have been used for centuries and with good reason - they're better for many plants and easier on gardeners.

Planting a raised bed

Raised beds allow crops to thrive in relatively tight quarters, so experiment with closer spacing than if the plants were in rows in the ground. Plant crops successively in small batches. One trick is to start seedlings in a sheltered area and then transplant them into the bed. This helps to keep the soil covered with actively growing crops. Thin and space the plants so that the leaves continually provide shade on the soil. This will help retain moisture in dry spells and reduce weed germination. Cultivate lightly between the plants to control weeds at their smallest visible stage. Fine mulches such as, shredded straw or leaves, dried grass clippings, coffee grounds or buckwheat hulls can be spread thinly – up to about ½ inch - on the soil among plants to further discourage weeds and keep the soil moist.

Growing in raised beds can become second nature; with practice and the experience gained you will be amazed at the quantity and quality of fresh produce you can from such a small space.

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