



## In-ground Garden Beds



### Considerations:

- **Start-up costs are low:** Using existing soil saves money
- **Soil needs to be tested:** Nutrients may be low. Soil may need to be amended for optimum plant growth.
- **Less start-up work:** May need to kill or remove grass, but no construction is needed.
- **Less permanent:** Can easily be replaced or moved to another location.
- **Lower water requirements:** In-ground beds won't dry out as quickly as raised beds.
- **Easier for irrigation systems:** Irrigation systems for flat, in-ground gardens are simple to design and easy to install compared to raised beds.

### Site Selection

- **Choose a sunny spot.** Most vegetables do best in full sun, over 8 hours of direct sunlight per day. If you don't have this much sun, consider crops that are more likely to tolerate some shade, such as herbs, and greens, like lettuce and spinach.
- **Avoid low-lying areas.** Plant roots need oxygen, and vegetables are particularly sensitive to being submerged. Avoid putting a vegetable garden in a spot where the water accumulates after a rainstorm.
- **Avoid the perimeter of old houses.** Any house built prior to 1978 is likely to have been painted with lead paint that has subsequently chipped and fallen onto the soil around the house. As a result, lead levels in the soil may be high enough that growing edible produce is not recommended. If in doubt, test your soil – standard soil tests screen for lead levels, and alert you if the lead levels may pose a concern.
- **Consider convenience.** If you have many spots to choose from, consider a location that is easy for you to get to, and one with easy access to irrigation water.
- **Don't plant where Black Walnut leaves fall.** The leaves and roots contain a chemical that inhibits some vegetables such as asparagus, cabbage, eggplant, pepper, potato, rhubarb, and tomato.
- **Consider how the garden will fit into your home landscaping.** An archway or a short doorway can set off the area from the rest of the landscape. Many websites show creative ways to incorporate a vegetable garden into you landscaping.



### Site preparation

- **Test the soil.** Vegetable crops grow best in soils with a pH of 6.5-6.8. In northern IL, our soil is usually slightly alkaline (pH 7.0-7.5). Testing the soil will tell you if you need to add material to adjust the pH or add other nutrients. The Kane County Farm Bureau offers a soil testing service (<http://www.kanecfb.com/media/SoilBrochure2018.pdf>). Contact the Kane County Master Gardeners for assistance on amending soil, if recommended.

- **Prepare the ground for planting.** Eliminate grass or weeds that are in the planned garden area. Two main ways:



- Before grass has started to grow in the spring, or after mowing very short. Remove the grass or sod by hand. This is a good when an instant result is needed, but will require some organic matter be added to the soil.
- In summer or fall in the year before planting, either by smothering or sheet mulching:
  - **Smother** the area by laying down a sheet of black plastic (6-mil or heavier) and weighing it down with heavy rocks or sandbags around the edges. Remove plastic in the spring when the sod underneath has been completely killed. You don't need to remove the sod before planting.
  - **Sheet mulch** the area by placing 5-7 sheets of newspaper down in the area and layer compost or other organic matter (chopped up leaves, straw, grass clippings, composted animal manure, mulch) over the top. Wet the paper as you put it down to keep it from blowing away. The organic layers on top will break down while the weeds below are dying out, resulting in a weed-free and ready-to plant-garden space in the spring. Organic matter, when added to clay soils, improves drainage, lowers the pH, and adds nutrients.

Tilling is not recommended because it destroys the soil structure which is the foundation for healthy plant roots. Tilling also brings up weed seeds that have been lying dormant, creating more weeds. By not tilling, you will maintain erosion control, soil moisture conservation, have fewer weeds and build soil structure and health.

### Bed Design

Walking on the soil in the planting areas compacts the soil. Plan to have paths to walk on between the actual planting areas. The planting areas should be no more than 4 feet wide so that you can reach across the bed to weed or harvest while kneeling in the walkway. A good size planting area recommendation is around 4 feet wide by 8 feet long.

### Sources

<https://extension.illinois.edu/veggies/index.cfm>

[https://www.canr.msu.edu/resources/preparing\\_the\\_smart\\_vegetable\\_garden](https://www.canr.msu.edu/resources/preparing_the_smart_vegetable_garden)

<https://extension.uga.edu/publications/detail.html?number=C1027-3&title=Raised%20Beds%20vs.%20In-Ground%20Gardens>

<https://extension.unh.edu/resource/preparing-vegetable-garden-site>

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