

## Vegetable Garden Design

Whether you are an experienced vegetable gardener, one who has just begun to dabble in this fine art, or a raw beginner, laying out the garden each year can seem like a daunting task. However, there are only a few basic ideas to keep in mind. In any case, once the vegetables grow and produce, no one will notice the mistakes.

### Decision #1: Site

If you are starting a new garden, you must consider where to put it. Vegetables need lots of sun and well-drained soil. Consider an area to the south of buildings and large trees. Clock how many hours of sun the proposed site has, before you start digging. Vegetables really prefer unobstructed sun for the entire day, but a little shade in the early morning or late evening is acceptable. If the soil does not drain well, consider raised beds. Make sure your garden is close to the house and accessible. If it is a "chore" to go to the garden, most likely it will not be maintained and the vegetables will not be used. It is also very important to place the garden close to a water source.

### Decision #2: Size

How big should the garden be? Consider how many people will be fed from the garden, how much time you have to maintain it, and whether you want produce for canning or freezing. With experience, you will know how large the garden should be for your lifestyle and family. Start out small and go larger over the years, as needed. If you start with a large garden, the effort and the amount of produce may overwhelm you.

### Decision #3: Style

What will your garden look like? You can plant in traditional single rows, wide rows, or blocks. You can have raised beds or a level garden. The paths can be bark, boards, gravel, pavers, or brick. The overall shape can be straight-edged, curved, or even circular.

### Decision #4: What Goes Where

First decide what you want to grow. Start out with vegetables your family enjoys, but always leave a little room to experiment with something new. Some crops, like corn, only do well if you have room for a large block. If your family will not eat that much and you will not be preserving, it makes no sense to plant corn.

Many crops can be planted in succession, so you get twice as much from the same space and extend your fresh vegetable season. You can plant cool season vegetables, like lettuce, radishes, or peas, early in the season, and then once they are finished, use the same space to grow a later fall crop of something like carrots, beets, or cabbage.

Also consider interplanting different vegetables in the same space. Native Americans always planted beans, corn, and winter squash together (the "three sisters"). The corn provided a trellis for the beans, the beans put nitrogen back into the soil that the corn was depleting, and the squash covered the ground to smother weeds and deter small animals. A simplified version of this is to interplant peas with corn. The corn will provide some shade for the peas, and the peas will be finished before the corn has completely grown. When interplanting, consider the soil needs of each plant in terms of moisture and nutrients.

Crop rotation is an important factor when laying out the garden. Diseases and pests will wait in the soil over winter. If you don't make their prey readily available the next year, you will have fewer problems. If you have some perennial vegetables, such as asparagus or rhubarb, set aside one area of the garden that will not be rotated. Organizing your garden by plant families will also make crop rotation more beneficial, since most diseases and pests will attack all the plants in the same family. Following is a table of the major vegetable plant families.

Solanaceae	Tomato, pepper, eggplant, potato
Cruciferae (cole crops)	Cabbage, broccoli, mustard greens, cauliflower, kale, turnip, kohlrabi, radish
Leguminosae (legumes)	Pea, bean, soybean
Cucurbitaceae (cucurbits)	Cucumbers, squash, pumpkin, melon, gourd
Umbelliferae	Carrot, celery, parsnip, parsley, dill
Compositae	Lettuce, endive, salsify
Liliaceae	Asparagus, onion
Chenopodiaceae	Spinach, swiss chard, beets

## Companion Planting

There is no scientific evidence that companion planting works, but many gardeners have sworn by it for centuries. Companion planting is the practice of interplanting vegetables, herbs, and flowers in order to attract beneficial insects or to camouflage pest-prone crops. Some common companion planting ideas include:

- Plant marigolds in garden to repel pests.
- Plant flowers in the Aster family (sunflower, purple coneflower, black-eyed susan) to attract beneficial insects such as lady beetles, spined soldier bugs, assassin bugs, and predatory wasps.
- Plant beans and potatoes together to repel Colorado potato beetles and Mexican bean beetles.
- Plant onions to repel many insects and potentially, wildlife.

Even if you don't give much credence to companion planting, the idea of having flowers intermixed with the vegetables is a pretty picture. See [Companion Planting](#) for more information.

Figure 1 shows a very basic garden design. This garden has four planting blocks (labeled A, B, C, D). The crops should be rotated between these blocks each year. This ensures that no crop will be planted in the same area within a four-year period. Each block has two planting beds. The overall size of this garden is 18' by 26'. Each bed is 4' square and each path should be at least 2' wide to allow plenty of room for a wheelbarrow. Perennials and flowers are assigned to one edge of the garden. This garden design is very easy to make larger or smaller.

## References

B. Damrosch. *The Garden Primer*. New York, NY: Workman Publishing, 1988.

S.J. Cunningham. *Great Garden Companions*. Emmaus, PA: Rodale Press, Inc, 1998.

[Companion Planting](#), Ecogardening Factsheet #10. Cornell University: Winter 1994

[Good & bad companions for vegetables](#). GardenGuides.com

