

# Square-Foot Garden Sample Planting Layout

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**March, 2026**

## Introduction

Designing planting beds using a square foot layout can maximize the amount grown in the planting area while also utilizing companion planting associations. The planting layouts in this handout are based on general companion planting information and science-based companion planting strategies from the book “Plant Partners” by Jessica Walliser. Companion planting groups different plants together according to their compatibility. Some of these associations are based on historical or anecdotal evidence; other associations are supported by research. Often, companion planting is based on whether plants seem to grow well or poorly together, but companion planting associations can also be based on nutrient or water requirements, plant structure and growth habits, camouflage, or increased pest and disease resistance. The goal for companion planting in the square foot garden layout is to maximize cooperation and minimize competition between plants. The layouts below provide just a couple examples of the many potential arrangements for your garden beds. Additional plant spacing guidelines and example layouts can be found online or in the book Square Foot Gardening, by Mel Bartholomew.

- When planting, transplant or direct sow seeds after the danger of last frost, from early May through early June. Staggering planting times can allow for a continual harvest of certain crops.
- Add mulch around young plants to help retain water and prevent weeds.
- After harvesting early cool-season crops, you can fill

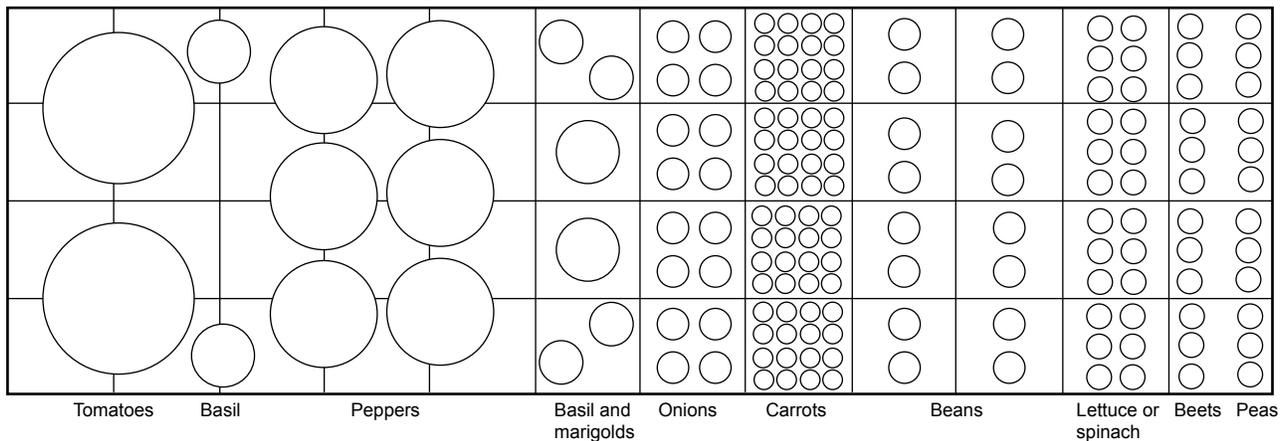
the space with additional warm-season vegetables or flowers, plant cover crops, or keep the area covered with mulch such as weed and herbicide-free straw or grass clippings to prevent weed growth.

- If you are replanting the area with additional plants, or at the end of the season, make sure to add compost or other fertilizer to the area to ensure healthy growth of the next crop.

The sample planting bed layouts below each represent a 4' × 12' garden bed with vegetables companion planted with various herbs, flowers, or other vegetables. Each square represents 1 square foot while the circles represent a crop's average diameter. The number of plants per square foot is based on spacing recommendations from the Square Foot Gardening book and calculated using spacing information on seed packets. Some examples are below. To calculate, divide 12 inches (the square you are planting in) by the seed spacing recommended on the seed packet, then multiply the resulting number by itself. For example, for 3" spacing, divide  $12"/3 = 4$ . Then multiply  $4 \times 4 = 16$ , for 16 plants per square foot.

- 16 per Square Foot (3" spacing): Radishes, carrots, green onions, beets.
- 9 per Square Foot (4" spacing): Bush beans, spinach, garlic.
- 4 per Square Foot (6" spacing): Lettuce, swiss chard, basil.
- 1 per Square Foot (12" spacing): Broccoli, cabbage, peppers, eggplant, parsley.

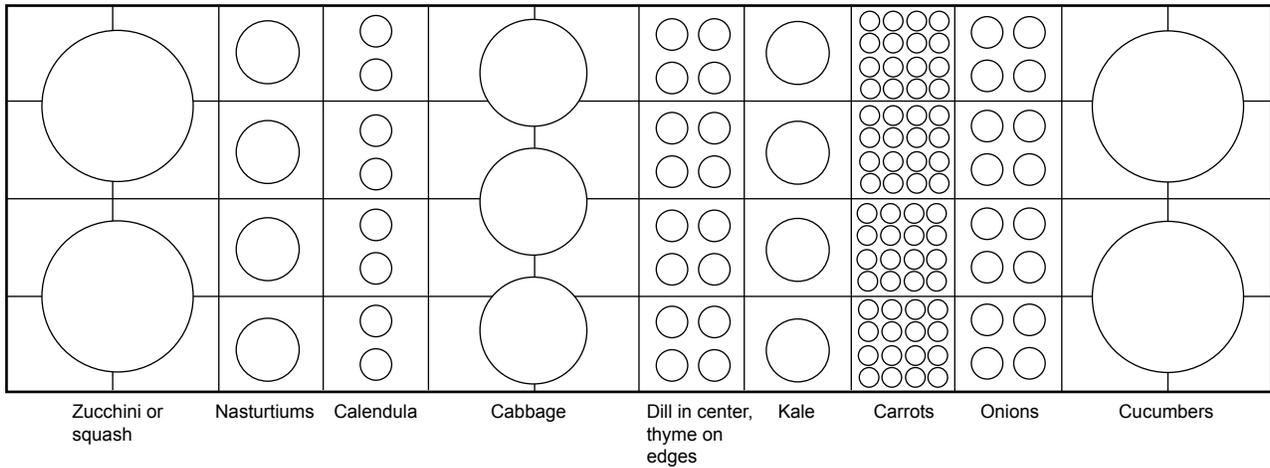
## Sample Planting Bed #1



CROP	PRODUCTION METHOD	DAYS TO MATURITY	COMPANION PLANTING THEORY
Tomato	Transplant	55 – 90	Marigolds are anecdotally thought to repel tomato nematodes, basil is aromatic and can help mask tomato plants from thrips and limit egg-laying by hornworms and armyworms. Marigolds can also deter onion flies and cabbage root flies.
Basil	Transplant		
Pepper	Transplant	60 – 100	
Marigold	Direct Sow		
Onion	Transplant (Sets)	100 – 120	Planting alliums around peppers can deter aphids.
Beans	Direct Sow	50 – 90	Beans and peas fix nitrogen that can be available to surrounding plants, although most nitrogen becomes available at the end of the season.
Carrots	Direct Sow	55 – 80	
Leafy Greens	Direct Sow	45 – 65	Cool season crops can be harvested in a similar timeframe, allowing additional crops to be planted in this area. A trellis or cattle panel arch can be placed on the ends of the beds for vining crops.
Beets	Direct Sow	50 – 65	
Peas	Direct Sow	50 – 80	

Table 1. Crop information for sample planting bed #1.

## Sample Planting Bed #2



CROP	PRODUCTION METHOD	DAYS TO MATURITY	COMPANION PLANTING THEORY
Summer Squash	Direct Sow	50 - 70	
Nasturtiums	Direct Sow or Transplant		Nasturtium can emit volatile compounds that pests may detect, potentially confusing or deterring them from locating target crops. Flowers also provide nectar sources for beneficial insects, which in turn may help suppress pest populations.
Calendula	Direct Sow		Calendula may serve as an alternate host for certain insect pests (e.g., aphids and leafhoppers), drawing them away from target crops. Flowers also provide nectar sources for beneficial insects, which in turn may help suppress pest populations.
Cabbage	Transplant	60 - 90	
Dill	Direct Sow		Flowering herbs like dill may attract beneficial insects (parasitoids, predators) that could in term suppress pest populations (e.g. caterpillars on brassicas)
Thyme	Transplant		
Kale	Direct Sow or Transplant	50 - 55	
Carrots	Direct Sow	45 - 65	
Onions	Transplant (Sets)	55 - 85	
Cucumbers	Direct Sow	50 - 70	A trellis or cattle panel arch can be placed on the ends of the beds for vining crops.

Table 2. Crop information for sample planting bed #2.

### References

- Bartholomew, M. (2005). Square foot gardening: A new way to garden in less space with less work. Rodale.
- Burrows, R. 2019. Vegetable Gardening in South Dakota. South Dakota State University.
- Walliser, J. (2020). Plant Partners: Science-Based Companion Planting Strategies for the Vegetable Garden. Storey Publishing, LLC.



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