

# Garden Plan II: Layout

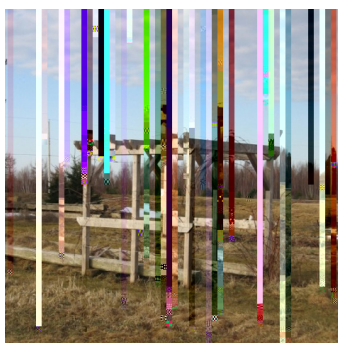
**Your garden layout will be influenced by how much space and time you have, and by the type of cultivating equipment you plan to use.**

And don't underestimate aesthetic appeal influenced by good ability of plan and done



candidates for this type of gardening. Some plants entwine themselves onto the support, while others may need to be tied. Remember that a vertical planting will cast a shadow, so beware of shading sun-loving crops, or else take advantage of the shade by planting shade-tolerant crops near the vertical ones.

Plants grown vertically take up much less space on the ground, and although the yield per plant may be (but is not always) lower, the yield per square meter (square foot) of garden space is much greater. Because vertically growing plants are more exposed, they dry out faster and may need to be watered more frequently than if they were allowed to spread over the ground. This fast drying is also an advantage to those plants susceptible to fungus diseases. A higher rate of fertilization may be needed, and soil should be deep and well-drained to allow roots to extend vertically rather than compete with others at a shallow level.



## Interplanting

Growing two or more types of vegetables in the same place at the same time is known as interplanting. Proper planning is essential to obtain high production and increased quality of the crops planted. This technique has been practiced for thousands of years and is gaining widespread support in this country. For example, carrots and radish are commonly planted together in the same row. The fast growing radish acts as a nurse crop, and they are harvested long before the carrots reach maturity.

To successfully plan an interplanted garden, the following factors must be taken into account for each plant: length of the plant's growth period; its growth pattern (tall, short, below or above ground); possible negative effects on other plants (such as the allelopathic effects of sunflowers and Jerusalem artichokes on nearby plants); preferred season; and light, nutrient, and moisture requirements. Interplanting can be accomplished by alternating rows within a bed (plant a row of peppers next to a row of onions), by mixing plants within a row, or by distributing various species throughout the bed. For the beginner, alternating rows may be the easiest to manage at first.

Long-season (slow to mature) and short-season (quick to mature) plants like carrots and radishes, respectively, can be planted at the same time. The radishes are harvested before they begin to crowd the carrots. An example of combining growth patterns is planting smaller plants close to larger plants (e.g. radishes at the base of beans or broccoli). Shade tolerant species, like lettuce, spinach, and celery, may be planted in the shadow of taller crops. Heavy feeders, such as cabbage family crops, should be interplanted with less gluttonous plants.

Interplanting can help keep insect and disease problems under control. Pests are usually fairly crop-specific: that is, they prefer vegetables of one type or family. Mixing families of plants helps to break up large expanses of the pest-preferred crop, helping to contain early pest damage within a small area, thus giving the gardener a little more time to deal with the problem. One disadvantage is that when it does come time to spray for pests, it's hard to be sure that all plants are protected.

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### **Intensive garden plant spacing**

Individual plants are closely spaced in a raised bed or interplanted garden. Also, an equidistant spacing pattern calls for plants to be the same distance from each other within the bed: that is, plant so that the center of one plant is the same distance from plants on all sides of it. In beds of more than two rows, this means that the rows should be staggered so that plants in every other row are between the plants in adjacent rows.

The distance recommended for plants within the row on a seed packet is the distance from the centre of one plant to the centre of the next. This results in an efficient use of space and leaves less area to weed and mulch. The close spacing tends to create a nearly solid leaf canopy, acting as a living mulch, decreasing water loss, and keeping down weed problems. However, plants should not be crowded to the point that disease problems arise or competition causes stunting.

intervals for a continuous harvest. This requires some care, though, because crops planted very early are likely to get a slower start because of low temperatures. In the case of corn, it can be disastrous to have two cultivars pollinating at the same time, as the quality of the kernels may be affected. Give early planted corn extra time to get started, for best results. Another way to achieve the same result is to plant, at once, various cultivars of the same vegetable; for example, you can plant an early-season, a mid-season, and a late-season corn at the same time and have a lengthy harvest.

Starting seeds indoors for transplanting is an important aspect of intensive gardening. To get the most from the garden plot, a new crop should be ready to take the place of the crop being removed. Several weeks may be gained by having 15 cm (6") transplants (4 to 6 leaf stage for cole crops) ready to go into vacated areas. Remember to recondition the soil for the new plants.

### **Succession and relay planting**

Succession planting is an excellent way to make the most of an intensive garden. To obtain a succession of crops, plant something new in spots vacated by spent plants. Corn after peas is a type of succession. Planting a spring, summer, and fall garden is another form of succession planting. Cool-season crops (broccoli, lettuce, pea) are followed by warm-season crops (bean, tomato, pepper), and where possible, these may be followed by more cool-season plants or even a winter cover crop.

Relaying is another common practice, consisting of overlapping plantings of one type of crop. The new planting is made before the old one is removed. For instance, sweet corn may be planted at two-week

TABLE 1. RADICAL GARDEN PACING GUIDE				
Crop	Plant spacing		Plant spacing	
	cm	inch	cm	inch
Asparagus	45			
Beans, bush	5-7.5	2-3	60-75	24-30
Beans, Lima	7.5-10	3-4	60-90	24-36
Beans, pole	10-30	4-12	90-120	36-48
Beans, wax		2	60-90	24-36
Beets	5-7.5	2-3	30-60	12-24
Broccoli	38-60	15-24	60-90	24-36
Brussels sprouts	45-60	18-24	75-90	30-36
Cabbage	38-45	15-18	75-90	30-36
Cabbage, Chinese	30-60	12-24	45-60	18-24
Cantaloupe	30-90	12-36	150-230	59-90
Carrot	2.5-5	1-2	38-75	15-30
Cauliflower	35-60	14-24	69-90	27-36
Chard, Swiss	15-30	6-12	45-75	18-30
Collards	45-60	18-24	60-90	24-36
Cucumbers	30-45	12-18	120-180	48-70
Eggplant	45-60	18-24	75-105	30-41
Endive	23-30	9-12	45-75	18-30
Kale	25-45	10-18	45-90	18-36
Kohlrabi	10-15	4-6	30-90	12-36
Leeks	7.5-15	3-6	30-75	12-30
Lettuce, Bibb	15-25	6-10	35-60	14-24
Lettuce, leaf	10-15	4-6	30-45	12-18
Mustard	7.5-10	3-4	45-75	18-30
Onion (sets)	5-10	2-4	30-60	12-24
Parsnip	20-25	8-10	45-60	18-24
Peas, garden	2.5-7.5	1-3	30-75	12-30
Peppers	45-60	18-24	75-90	30-36
Potato	25-45	10-18	60-90	24-36
Pumpkin	120-210	48-82	180-240	70-94
Rutabaga	7.5-15	3-6	38-75	15-30
Spinach	7.5-15	3-6	38-75	15-30
Squash, summer	60-90	24-36	90-150	36-59
Squash, winter	90-210	36-82	90-300	36-118
Sweet corn	25-30	10-12	60-90	24-36
Tomato	45-90	18-36	90	36
Turnip	5-7.5	2-3	30-60	12-24
Watermelon	180-240	70-94	210-300	83-118

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TABLE 1. INTERPLANTING GARDEN PACING GUIDE		
Crop	cm	inch
Asparagus	38-45	
Beans, bush	10-15	4-6
Beans, Lima	10-15	4-6
Beans, pole	15-30	6-12
Beets	5-10	2-4
Broccoli	30-45	12-18
Brussels sprouts	38-45	15-18
Cabbage	38-45	15-18
Cabbage, Chinese	25-30	10-12
Carrot	5-7.5	2-3
Cauliflower	38-45	15-18
Chard, Swiss	15-23	6-9
Collards	30-38	12-15
Cucumbers	30-45	12-18
Eggplant	45-60	18-24
Endive	38-45	15-18
Kale	38-45	15-18
Kohlrabi	15-25	6-10
Leeks	7.5-15	3-6
Lettuce head	25-30	10-12
Lettuce, leaf	10-15	4-6
Melons	45-60	18-24
Mustard	15-23	6-9
Onion	5-10	2-4
Parsnip	20-25	8-10
Peas	5-10	2-4
Peppers	30-38	12-15
Potatoes	25-30	10-12
Pumpkins	60-90	24-36
Rutabaga	10-15	4-6
Spinach	10-15	4-6
Squash, summer	45-60	18-24
Squash, winter	60-90	24-36
Sweet corn	38-45	15-18
Tomatoes	45-60	18-24
Turnip	10-15	4-6

**Note** To determine spacing for interplanting, add the centimeter (or inch) for the two crops to be planted together, and divide the sum by 2. For example, if radishes are planted next to beans, add 5 cm + 10 cm = 15 cm, then divide 15 cm by 2 = 7.5 cm. The radishes should be planted 7.5 cm (3") from the beans.

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# Activity 1

## **Draw a plan of your garden layout.**

Use graph paper marked to the appropriate scale and draw the outline of your garden. Mark which direction is north. Add permanent features like pathways, trees, bushes and long-lived perennials.

Using information from 'Garden Plan I: What to grow and how much', make a list of the vegetables you want to grow and how many of each you will need. Next, figure out how much space each vegetable crop will take up. Lastly, note each crop's nutrient requirements (heavy, moderate, or light).

Arrange the vegetables on your graph paper, trying to group those with similar nutrient requirements. Make sure tall crops are not shading others. Keep in mind how you might rotate your crops from year to year.

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# Activity 2

## **Make garden signs.**

Garden signs might be used to designate individual mini-gardens within a community garden or to identify specific vegetables within a bed. Either way, they are a fun addition to the vegetable garden!

Garden signs can be very simple. For small signs, start with any non-toxic material that is resistant to weather: small cedar shingles, strips of plastic cut from milk containers, or even old utensils. Use a permanent marker to write vegetable names and stick them into the soil.

Fancier signs can be made out of wood or large rocks. Use water-proof paints or, if gluing pictures onto wood, cover your creation with polyurethane.

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# Activity 3

## **Build a trellis or teepee**

To build a trellis, you will need two upright poles about 8 feet long and sharpened to a point at one end.